Mining and Reclamation Permit Application
Kinney No. 2 Mine

Volume 2

Carbon Resources
Coal For Carbon County

Carbon Resources LLC
P.O. Box 954
Sandia Park, NM 87047
505-286-1253

Carbon Resources, LLC
PO Box 954
Sandia Park, NM 87047
Telephone: (505) 286-1253

May 9, 2011

Mr. John Baza, Director
Department of Natural Resources
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84116

Dear Mr. Baza,

RE: PERMIT APPLICATION RESPONSE TO DEFICIENCIES, TASK ID# 3779 DATED 5/2/11 FOR KINNEY NO. 2 MINE - PERMIT NO. C/007/0047

In response to the Divisions Technical review deficiencies, Carbon Resources submits the attached permit responses to the technical deficiencies outlined in the Division's letter of May 2, 2011. The deficiencies letter has been utilized as a guidance document to address the applicable regulations as directed, and to respond to the technical deficiencies. The guidance document contains the deficiencies followed by a description of how the deficiency was addressed and, with some exceptions, the page in the MPR where the deficiency was addressed.

Three copies of the appropriate portions of the MRP with deficiencies addressed in redline strike-out format are herewith included for review by the Division. As per agreement with Joe Helfrich, Team Leader, we have formatted the current responses in blue text to differentiate the latest textual changes from the previous red text to make it clear what is new. Having both the reline-strikeout from the previous round or revisions together with the addition of blueline-strikeout appears to be useful in minimizing confusion. We will provide final copies just as soon as the Division reviews and approves the changes.

This submission is accompanied by Forms C1 and C2 as required.

Please feel free to contact me, Greg Hunt at (970) 856-9477, or Ben Grimes at (435) 653-2304 with any questions regarding this application.

Respectfully Submitted,

Greg

Gregory Hunt

File in:
☐ Confidential
☒ Shelf
☐ Expandable
Date Folder 010912 C/007/0047 Vol. 2 of 4
Incoming - Also see Confidential

RECEIVED
MAY 16 2011
DIV. OF OIL, GAS & MINING

EXHIBIT 1

Documentation of Existing Site Conditions

Refer to Map 14 For Photograph Locations

RECEIVED
OCT 0 4 2010
DIV. OF OIL, GAS & MINING

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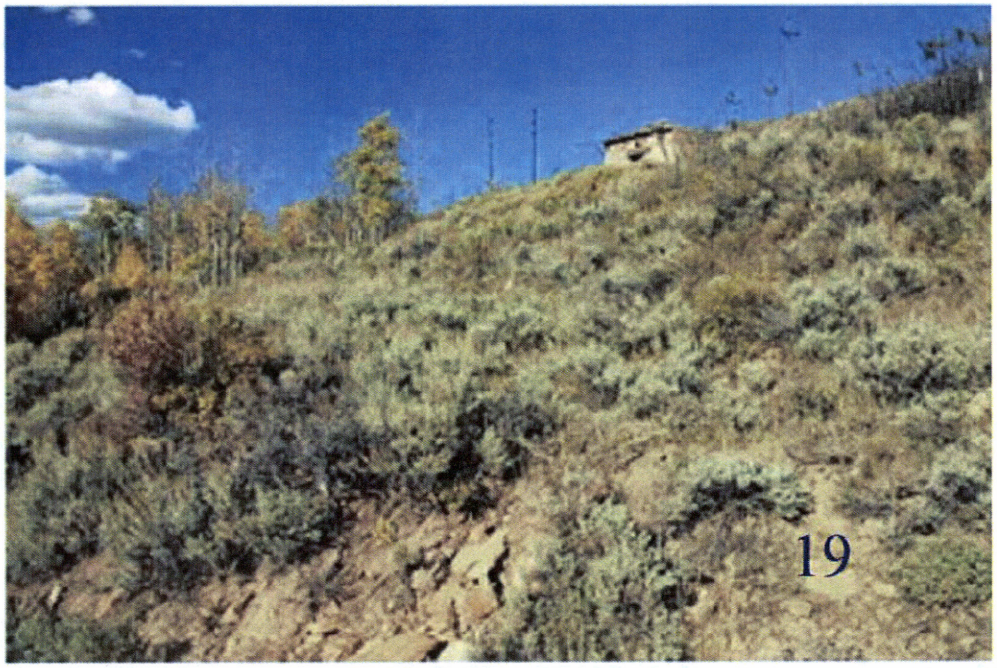
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180 Degree Panorama

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EXHIBIT 2

Prime Farmland Determination

United States Department of Agriculture

NRCS
Natural Resources Conservation Service
240 West Highway 40 333-4
Roosevelt, UT 84066
(435) 722-4621
FAX (435) 722-9065

March 9, 2006

Ben Grimes
Hansen, Allen & Luce Engineers
23 South Carbon Avenue, Suite #21
P.O. Box 777
Price, UT 84501

Re: Prime, State Important and Unique Farmlands Determination for Kinney No. 2 Mine, near Scofield, UT; Job # 308.01.100

Dear Mr. Grimes:

We have reviewed your request for a determination of prime, state important and unique farmlands.

The soils do not meet the criteria for prime, state important or unique farmlands for one or more of the following reasons:

1. The soils have a temperature regime that is Cryic. The mean summer temperature is less than 59 degrees F. (15 degrees C.); and or

2. The product of K (erodibility factor) x percent slope is greater than 2.0 for prime farmlands, and is greater than 5.0 for state important farmlands; and or

3. More than 10 percent of the surface layer (upper 6 inches) in these soils consists of rock fragments coarser than 3 inches (7.6 cm); and or

4. The soils have a pH of greater than 8.6 in some horizons within a depth of 20 inches; and or

5. The area does not have a developed irrigation system that is of adequate quality or quantity to grow the commonly grown crops adapted to the region in 7 or more years out of 10; and or

6. The area is urban land.

7. Carbon County has not designated any lands as unique farmlands.

I am enclosing a Form AD-1006, FARMLAND CONVERSION IMPACT RATING for your use.

Robert H. Fish
Soil Scientist

Cc: Wayne Greenhalgh, DC, NRCS, Price, UT

Enclosure

The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 – Federal agencies involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form.

Step 2 – Originator will send copies A, B and C together with maps indicating locations of site(s), to the Natural Resources Conservation Service (NRCS) local field office and retain copy D for their files. (Note: NRCS has a field office in most counties in the U.S. The field office is usually located in the county seat. A list of field office locations are available from the NRCS State Conservationist in each state).

Step 3 – NRCS will, within 45 calendar days after receipt of form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland.

Step '4 – In cases where farmland covered by the FPPA will be converted by the proposed project, NRCS field offices will complete Parts II, IV and V of the form.

Step 5 – NRCS will return copy A and B of the form to the Federal agency involved in the project. (Copy C will be retained for NRCS records).

Step 6 – The Federal agency involved in the proposed project will complete Parts VI and VII of the form.

Step 7 – The Federal agency involved in the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA and the agency's internal policies.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

Part I: In completing the "County And State" questions list all the local governments that are responsible for local land controls where site(s) are to be evaluated.

Part III: In completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them.

2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities) that will cause a direct conversion.

Part VI: Do not complete Part VI if a local site assessment is used.

Assign the maximum points for each site assessment criterion as shown in § 658.5 (b) of CFR. In cases of corridor-type projects such as transportation, powerline and flood control, criteria #5 and #6 will not apply and will, be weighed zero, however, criterion #8 will be weighed a maximum of 25 points, and criterion #11 a maximum of 25 points.

Individual Federal agencies at the national level, may assign relative weights among the 12 site assessment criteria other than those shown in the FPPA rule. In all cases where other weights are assigned relative adjustments must be made to maintain the maximum total weight points at 160.

In rating alternative sites, Federal agencies shall consider each of the criteria and assign points within the limits established in the FPPA rule. Sites most suitable for protection under these criteria will receive the highest total scores, and sites least suitable, the lowest scores.

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, adjust the site assessment points to a base of 160. Example: if the Site Assessment maximum is 200 points, and alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site "A."}$$

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 3/8/06
Name Of Project Kinney No. 2 Mine (Scofield, UT)	Federal Agency Involved
Proposed Land Use Coal Mine	County And State Carbon County, Utah

PART II *(To be completed by NRCS)*	Date Request Received By NRCS 3/8/06	
Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply -- do not complete additional parts of this form).* Yes ☐ No ☑	Acres Irrigated	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount Of Farmland As Defined in FPPA Acres: %
Name Of Land Evaluation System Used	Name Of Local Site Assessment System	Date Land Evaluation Returned By NRCS

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly				
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	0.0	0.0	0.0	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value				
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	0	0	0	0

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points				
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
TOTAL SITE ASSESSMENT POINTS	160	0	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	0	0	0	0
Total Site Assessment *(From Part VI above or a local site assessment)*	160	0	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	0	0	0	0

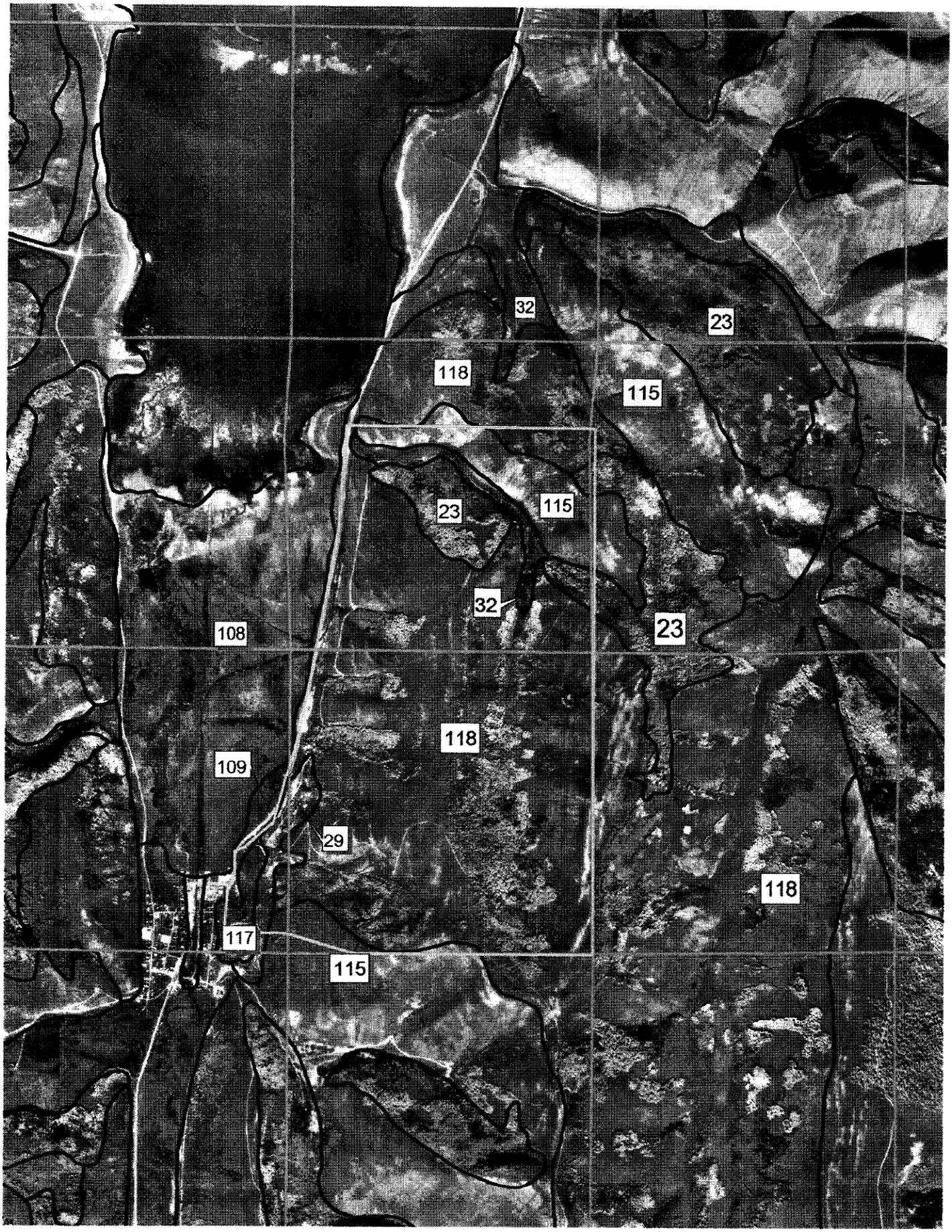
Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes ☐ No ☐

Reason For Selection:

(See Instructions on reverse side)

Form AD-1006 (10-83)

This form was electronically produced by National Production Services Staff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HANSEN ALLEN & LUCE INC.
23 South Carbon Ave, Suite #21
Price, Utah 84501
Phone: (435) 636-8269
Fax: (435) 636-8269

Fax Transmission

To: ROBERT FISH NRCS

Date: 3/8/06 | Fax#: 435-722-9065

Job #: 308.01.100 | Project:

NO. PAGES	DATE	ITEM
2		

SUBMITTED

☐ For Approval	☒ For Review & Comments
☐ As Requested	☐ For Use
☐ Approved as Submitted	☐ Returned for Corrections
☐ Approved as Noted	☐ Other _____

Copies to:

Consulting Engineers Specializing in Water Resources, Civil Engineering and the Environment

Services

- Regulatory Coordination and Permitting
- Complex Analytical Analyses
- Studies
- Master Planning
- Design
- Services During Construction
- Litigation Support

Areas of Specialization

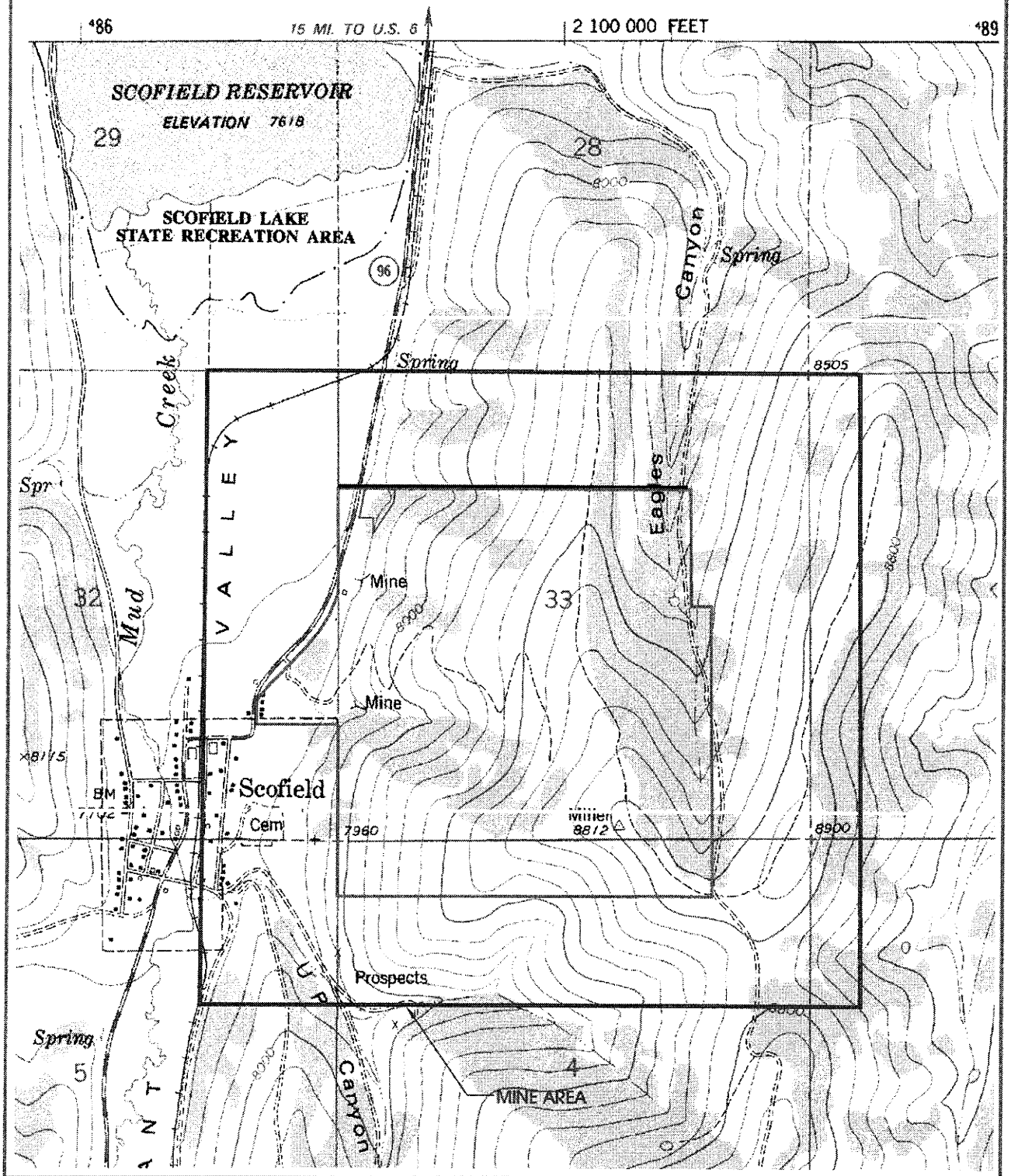
- Water Supply
- Wastewater Disposal
- Storm Drainage and Flood Control
- Hydrology
- Hydraulics
- Water Quality Management
- Solid and Hazardous Waste
- Environmental Permitting

GENERAL COMMENTS

PLEASE PROVIDE PRIME FARMLAND DETERMINATION FOR:
- KINNEY NO. 2 MINE -
- AREA SHOWN ON ATTACHED MAP
- SEND TO: BEN GRIMES
HANSEN, ALLEN & LUCE ENGINEERS
P.O. BOX 777
PRICE, UT 84501

Signed:

SCOFIELD QUADRANGLE
UTAH
7.5 MINUTE SERIES (TOPOGRAP
NW/4 SCOFIELD 15' QUADRANGLE



HANSEN ALLEN & LUCE, Inc. ENGINEERS

KINNEY NO. 2 MINE
PRIME FARMLAND DETERMINATION REQUEST

FIGURE 1

Exhibit 3

Distressed Coal Letter of Intent To Buy

Letter of Intent

Carbon Resources, LLC
PO Box 11789
Albuquerque, NM 87192

Gentlemen:

Arch Coal Sales Company, Inc. individually and as agent for the operating companies of Arch Coal, Inc. ("ARCH"), and Carbon Resources, LLC, a Nevada limited liability company, hereby declare their mutual intent to enter into a sales agreement to buy and sell approximately eight thousand tons of "distressed coal" buried under a thin soil veneer within the Carbon Resources Kinney No. 2 planned surface facility land.

ARCH owns and operates a coal cleaning facility on Ridge Road, near Price, Utah. Carbon is moving forward with plans to open the Kinney No. 2 Mine near Scofield, Utah. ARCH, from time to time, purchases "distressed coal" and processes said coal through the cleaning facility near Price. Carbon has an estimated eight thousand tons of coal buried beneath a thin veneer of soil that will be dug up during construction of surface facilities for the Kinney No. 2 Mine. Carbon desires to sell this "distressed coal" to ARCH and ARCH desires to purchase said coal from Carbon. Terms of a buy-sell agreement for said coal will be negotiated in good faith and both parties agree to complete said negotiations and sign a sales agreement no later than October 1 2011, provided, however, that either party may terminate its participation and obligations under this Letter of Intent by providing five days advance written notice to the other party.

The parties may, from time to time, enter into additional agreements to buy and sell additional distressed coal from the Kinney No. 2 Mine.

For Arch Coal Sales Company, Inc.:

By: John Ziegler, Jr.
(Print)

Signature: _____ Date: 4/4/2011

Title: SR VP Sales & Administration

Agreed to by Carbon Resources, LLC:

By: J. H. Reeves
(Print)

Signature: _____ Date: 2/25/2011

Title: Managing Director

Exhibit 3

Offer to Purchase

Reclaimed Coal

from **Kyle Edwards** <kedwards@headwaters.com> hide details 11:47 AM (7 minutes ago) Reply

to Gregory Hunt <geohuntllc@gmail.com>
cc John Shaal <john.shaal@headwaters.com>
date Tue, Apr 19, 2011 at 11:47 AM
subject RE: Kinney Recliame Coal PDF
mailed-by headwaters.com

Greg, at this time Covol would like to offer $0.50 a ton for the reclaimed coal piles. The reason for this is the market, unknowing what the product will be after cleaning it and the cost of disposal of the by- product. As we talked about this is F.O.B mine site. We also reserve the right as you do to stop at any point of the process that we can't live with.

If this works we can drafted the agreement when your ready.

Kyle Edwards
Plant Manager
Covol Engineered Fuels - Wellington Ut
Cell phone: 435-820-1110
Plant Phone: 435-613-1631

From: Gregory Hunt [mailto:geohuntllc@gmail.com]
Sent: Monday, April 11, 2011 2:35 PM
To: Kyle Edwards
Subject: Kinney Recliame Coal PDF
- Show quoted text -

Reply Reply to all Forward

Exhibit 3

Scofield Town

Letter of Intent to Provide Water and Sewer Service

From:
Mike Erkkila <rmerkkila@hotmail.com>
To:
ghuntbbc <ghuntbbc@aol.com>

Date:
Tue, Apr 5, 2011 4:44 pm

SCOFIELD TOWN

INCORPORATED MARCH 7, 1892

Carbon County, Utah

SCOFIELD ROUTE

BOX 700

HELPER, UTAH 84526

(435) 448-9221

FAX (435) 448-9207

Greg Hunt

Carbon Resources,

The Town Council felt that this LOI from 2009 was still in place and would honor it. They felt it would be a good idea to wait until Carbon Resources emerges from chapter 11 to sign a definitive agreement.

Cordially,

Mike Erkkila

Scofield Mayor

Carbon Resources, LLC
PO Box 11789
Albuquerque, NM 87192

Gentlemen:

Scofield Town, a political subdivision of the State of Utah ("the town"), and Carbon Resources, LLC, a Nevada limited liability company ("Carbon"), hereby declare their mutual intent to enter into an agreement ("Agreement") to provide and receive sewer and water services.

Scofield Town, owns and operates a municipal sewer and potable water system both having capacity exceeding the towns needs, and owns water rights in Scofield Reservoir with point of diversion rights on Mud Creek, within the Scofield City Limits.

Carbon Resources, LLC owns surface lands and the rights to mine coal from the planned Kinney No. 2 Mine which in part lies within the Scofield City Limits. Carbon Resources anticipates the need for sewer, potable and non-potable water services in order to operate the planned mine. Furthermore, Carbon desires to purchase from Scofield Town said services.

Scofield Town, pursuant to a resolution of the Scofield Town Council passed on the 8th Day of December 2008, does hereby declare its intent to enter into said agreement with Carbon Resources to provide sewer, and water services, as needed for the operation of the planned Kinney No. 2 Mine. Terms of said agreement will be negotiated in good faith and both parties agree to make every effort to complete said negotiations and sign said agreement no latter than June 1 2009.

For Scofield Town:

By: MIKE ERKKILA
(Print)

Signature: Mike Erkkila Date: 2-14-09

Title: MAYOR

Agreed to by Carbon Resources, LLC:

By: CLAY WISDOM
(Print)

Signature: _____ Date: 2-16-09

Title: CFO

EXHIBIT 4- Other Permits

UPDED Permit

Air Quality Permit

UDOT Highway Access Permit

MSHA Permit

Carbon County Conditional Use Permit

Utah DNR Div. of Water Rights, Small Dam Permit (Negative Determination)

Utah Department of Commerce License Number

Dwelling within 300 Feet Waiver Letter

Archeological Clearance

Raptor Nest 1451 Permt with US Fish & Wildlife Service

UPDES Permit

State of Utah
GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

June 15, 2010

CERTIFIED MAIL
(Return Receipt requested)

Clay Wisdom, CFO
Carbon Resources, LLC
P.O. Box 954
Sandia Park, NM 87047

Dear Mr. Wisdom:

Subject: UPDES General Permit Coverage No. UTG040028 for the Proposed Kinney No. 2 Mine Site Near Scofield, Utah.

Enclosed is a signed copy of the Utah Pollutant Discharge Elimination System (UPDES) General Permit No. UTG040000 for the above referenced facility. Coverage under this general permit for your facility is referred to as application number UTG040028. The conditions and requirements of the permit are effective as of July 1, 2010. Copies of EPA form 3320-1, Discharge Monitoring Reports (DMR) forms, for reporting and self-monitoring requirements as specified in the permit, are available upon request. As a reminder, DMR forms are due in our office by the 28th of each month following each monthly monitoring period.

A fee schedule was included in the Utah Department of Environmental Quality Budget appropriation request at the direction of the Legislature and in accordance with Utah Code annotated 19-1-201. The fee schedule, as approved by the legislature, includes a prescribed fee for specific Industrial Categories. The prescribed fee for this general permit, UPDES General Permit for Coal Mine Facilities, is $1,800.00 for a five-year period from May 1, 2008 to April 30, 2013. A prorated amount of $1,020.00 has been appropriated for your permit coverage from July 1, 2010 to April 30, 2013 and a separate invoice had been included herein. Therefore, please remit $1,020.00 within 30 days from receipt of this letter to:

Department of Environmental Quality
Division of Water Quality
Attn: Jalynn Knudsen
P.O. Box 144870
Salt Lake City, UT 84114-4870

Please be sure to include the invoice number with you remittance.

The Utah Division of Water Quality (DWQ) values your feedback, and as the State agency charged with the administration of issuing UPDES permits, we are continuously looking for ways to improve our quality of service to you. DWQ Director Walter L. Baker is committed to continually assessing and improving the level and quality of services provided to you. In an effort to improve the State UPDES permitting process, we are asking for your input. Please take a few minutes to comment on the quality of service you received by completing the "Give Feedback to DWQ" form link on DWQ's webpage at www.waterquality.utah.gov. Thank you for assisting us in improving our service to you.

Please continue to keep DWQ informed of your project status for coordination of future inspections. If you have any questions with regards to this matter, please contact Jeff Studenka of this office at (801) 536-4395 or by e-mail at jstudenka@utah.gov.

Sincerely,

Michael D. Herkimer, Manager
UPDES IES Section

MH/JS/mc

Enclosure

cc: Qian Zhang, P.E., EPA Region VIII (w/ Encl.)
Claron Bjork, SE District Health Department
Dave Ariotti, SE District Engineer
Daron Haddock, Utah Division of Oil Gas & Mining (w/ Encl.)
Jim Karpowitz, Utah Division of Wildlife Resources
Nathan Darnall, U.S. Fish & Wildlife Services

F:\wp\GP-Coal Mines\Carbon Resources -Scofield\Gen Permit coverage ltr June 2010.doc

Permit Coverage No. UTG040028
Minor Industrial

STATE OF UTAH
DIVISION OF WATER QUALITY
DEPARTMENT OF ENVIRONMENTAL QUALITY
SALT LAKE CITY, UTAH

AUTHORIZATION TO DISCHARGE UNDER THE

UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM
(UPDES)

GENERAL PERMIT FOR COAL MINING
(UPDES Permit No.UTG040000)

In compliance with provisions of the Utah *Water Quality Act, Title 19, Chapter 5, Utah Code Annotated ("UCA") 1953, as amended* (the *"Act"*),

CARBON RESOURCES, LLC – Kinney No. 2 Mine

as identified in the general permit application No. UTG040028 is authorized to discharge from Outfall 001 to receiving waters named:

Mud Creek and Scofield Reservoir, tributaries to the Price and Colorado Rivers

in accordance with discharge points, effluent limitations, monitoring requirements and other conditions as set forth herein.

This permit shall become effective on July 1, 2010.

This permit and the authorization to discharge shall expire at midnight, April 30, 2013.

Signed this 14th day of June, 2010

Walter L. Baker, P.E.
Executive Secretary
Utah Water Quality Board

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I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Criteria for Inclusion in the General Permit for Coal Mining

This General permit shall apply only to the discharge of treated wastewater from:

Coal mining operations either new or existing in Utah which include or will include in part, or in whole, alkaline mine water drainage, storm water runoff from coal preparation plant associated areas, active mining areas, and post mining areas until the performance bond is released. The total dissolved solids (TDS) are limited to a concentration of 500 mg/L at all discharge points, or one ton per day as a sum from all discharges.

B. Notice of Intent for a General Permit for Coal Mining

Any facility which desires coverage under this general permit for coal mining and meets the requirements of Part I.A. may be issued general permit coverage by submitting a notice of intent (NOI) to the Division of Water Quality.

The NOI shall include:

1. A completed Environmental Protection Agency Application (EPA Form 3510-1) or equivalent information.

2. Location and identification number (such as 001, 002, etc.) of each existing discharge and/or proposed discharge point(s). This includes the latitude and longitude to the nearest 15 seconds and the name of the receiving water(s).

3. A description of the source of the wastewater for each discharge point.

4. A description of the treatment given or proposed for the wastewater at each discharge point and if necessary a justification of why no treatment is required.

5. Flow characteristics for each discharge point such as whether flow is or will be continuous or intermittent and indicate projected and/or actual average and maximum flows in gallons per day (gpd), or million gallons per day (MGD).

6. Data for each discharge point for the following parameters:

   a. Biochemical demand (BOD_5).
   b. Chemical oxygen demand (COD).
   c. Total organic carbon (TOC).
   d. Total suspended solids (TSS).
   e. Flow.
   f. Ammonia (as N).
   g. Oil and grease.
   h. Temperature.
   i. pH.
   j. Total dissolved solids (TDS).
   k. Total iron and metals, cyanide, phenols located in *Table III of UAC R317-8-3.12.*
   l. For discharge(s) of mine water or mine water and mine water mixed with surface runoff one acute whole efficiency toxicity test (WET) using two species and full dilution series

(five dilutions plus a control). Sediment pond discharges which have only surface runoff do not require WET tests.

m. Date and time of sampling for each parameter.

n. Date and time of analysis for each parameter.

o. Utah certified laboratory which has completed the analysis for each parameter.

For each discharge point the presence or absence of any toxic and/or priority pollutants as listed in *Table II, UAC R317-8-3.13.*

C. Description of Discharge Point(s).

The authorization to discharge provided under this permit is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under a UPDES permit is a violation of the *Act* and may be subject to penalties under the *Act.* Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge may be subject to criminal penalties as provided under the *Act.*

Outfall Number	Location of Discharge Point(s)
001	Storm water runoff from lone sedimentation pond to Mud Creek, Latitude 39° 44' 41" N, Longitude 111°9'3"W.

D. Narrative Standard.

It shall be unlawful, and a violation of this permit, for the permittee to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum or other nuisances such as color, odor or taste, or cause conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms; or result in concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by bioassay or other tests performed in accordance with standard procedures.

E. Specific Limitations and Self-monitoring Requirements.

1. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	Discharge Limitations a/ Averages 30-Day	7-Day	Daily Maximum	Monitoring Requirements Measurement Frequency	Sample Type
Flow, gpd or MGD b/	Report	N/A	Report	Monthly	Measured
Oil & Grease, mg/L c/	N/A	N/A	10	Monthly	Visual/Grab
Total Iron, mg/L	N/A	N/A	1.0	Monthly	Grab e/
Total Suspended Solids, mg/L	25	35	70	Monthly	Grab e/
Total Dissolved Solids, mg/L d/	Report	N/A	Report	Monthly	Grab e/
Dissolved Oxygen, mg/L f/	N/A	N/A	N/A	Monthly	Grab
Total Phosphorous, mg/L	N/A	N/A	Report	Monthly	Grab e/

The pH shall not be less than 6.5 standard units nor greater than 9.0 standard units in any sample and shall be monitored monthly by a grab sample.

There shall be no visible sheen or floating solids or visible foam in other than trace amounts.

There shall be no discharge of sanitary wastes or process water from coal preparation plants.

N/A - Not Applicable, gpd – gallons per day, MGD – million gallons per day

a/ See Definitions, *Part V.A* for definition of terms.

b/ For intermittent discharges, the duration of the discharges shall also be reported.

c/ If a visual sheen for oil and/or grease is observed, or there is another reason to believe oil and/or grease may be present in the discharge, then a grab sample must be taken immediately and the results shall not exceed 10 mg/L.

d/ For Total Dissolved Solids, if each outfall cannot achieve a 30-day average of 500 mg/L, then the permittee is limited to one ton (2000 lbs) per day as a sum from all outfalls.

e/ These samples may also be a composite sample.

f/ Dissolved oxygen shall not be less than 4.0 mg/L in any sample and shall be monitored monthly by a grab sample.

2. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): in the final effluent before mixing with any receiving waters.

3. Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) at outfall(s) (from approved decant procedures only) may comply with the following limitations instead of the otherwise applicable limitations for TSS in Part I.E.1:

Effluent Characteristics	Daily Maximum
Settleable Solids	0.5 ml/L

In addition to the monitoring requirements specified under Part I.E.1 all effluent samples collected during storm water discharge events shall also be analyzed for settleable solids. Such analyses shall be conducted monthly by grab samples.

4. Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period greater than the 10-year, 24 hour precipitation event (or snowmelt of equivalent volume) at outfall(s) from sedimentation ponds may comply with the following limitations instead of the otherwise applicable limitations:

The pH shall not be less than 6.5 standard units nor greater than 9.0 standard units. However as stated in Part I.E.3, all effluent samples collected during storm-water discharge events shall be analyzed for settleable solids and parameters identified under Part I.E.1.

5. The operator shall have the burden of proof that the discharge or increase in discharge was caused by the applicable precipitation event described in Parts I.E.3 and 4. The alternate limitations in Parts I.E.3 and 4 shall not apply to treatment systems that treat underground mine water only.

6. Additional monitoring shall be required for facilities that discharge into waters or watersheds on the Utah 303(d) list of impaired waters. These facilities shall be required to monitor for the pollutant(s) that cause the impairment for these waters. The Division of Water Quality will incorporate any additional sampling requirements for parameters of concern.

F. Storm Water Requirements. It has been determined that the aforementioned permittee has a regulated storm water discharge as per UAC R317-8-3.9., therefore, the following permit conditions governing storm water discharges apply.

1. Coverage of This Section.

a. Discharges Covered Under This Section. The requirements listed under this section shall apply to storm water discharges from this permitted facility, subject to effluent limitations listed in Part I.E. of this permit.

1) Site Coverage. Storm water discharges from the following portions of this permitted facility may be eligible for this permit: haul roads (nonpublic roads on which coal or coal refuse is conveyed), access roads (nonpublic roads providing light vehicular traffic within the facility property and to public roadways), railroad spurs, sidings, and internal haulage lines (rail lines used for hauling coal within the facility property and to offsite commercial railroad lines or loading areas), conveyor belts, chutes, and aerial tramway haulage areas (areas under and around coal or refuse conveyor areas, including transfer stations), equipment storage and maintenance yards, coal handling buildings and structures, and inactive coal mines and related areas (abandoned and other inactive mines, refuse disposal sites and other mining-related areas on private lands).

2. Prohibition of Non-storm Water Discharges.

a. The following non-storm water discharges may be authorized by this permit provided the non-storm water component of the discharge is in compliance with this section; fire fighting activities; fire hydrant flushings; potable water sources including waterline flushings; drinking fountain water; irrigation drainage, lawn watering; routine external building washdown water where detergents or other compounds have not been used in the process; pavement washwaters where spills or leaks of toxic or hazardous materials (including oils and fuels) have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; uncontaminated compressor condensate; uncontaminated springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials such as solvents.

3. Storm Water Pollution Prevention Plan Requirements. Most of the active coal mining-related areas, described in paragraph 1. above, are subject to sediment and erosion control regulations of the U.S. Office of Surface Mining (OSM) that enforces the Surface Mining Control and Reclamation Act (SMCRA). OSM has granted authority to the Utah Division of Oil Gas and Mining (DOGM) to implement SMCRA through State SMCRA regulations. All SMCRA requirements regarding control of erosion, siltation and other pollutants resulting from storm

water runoff, including road dust resulting from erosion, shall be primary requirements of the pollution prevention plan and shall be included in the contents of the plan directly, or by reference. Where determined to be appropriate for protection of water quality, additional sedimentation and erosion controls may be warranted.

a. Contents of Plan. The plan shall include at a minimum, the following items:

1) Pollution Prevention Team. Each plan shall identify a specific individual or individuals within the facility organization as members of a storm water Pollution Prevention Team that are responsible for developing the storm water pollution prevention plan and assisting the facility manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's storm water pollution prevention plan.

2) Description of Potential Pollutant Sources. Each plan shall provide a description of potential sources that may reasonably be expected to add significant amounts of pollutants to storm water discharges or that may result in the discharge of pollutants during dry weather from separate storm sewers draining the facility. Each plan shall identify all activities and significant materials that may potentially be significant pollutant sources. Each plan shall include, at a minimum:

a) Deadlines for Plan Preparation and Compliance
The permittee shall prepare, implement and/or update a plan in compliance with the provisions of this section within 270 days of the effective date of this permit.

b) Keeping Plans Current

The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, that has a significant effect on the potential for the discharge of pollutants to the waters of the State or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified by the plan, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with the activities at the mine.

c) Drainage.

(1) A site map, such as a drainage map required for SMCRA permit applications, that indicate drainage areas and storm water outfalls. These shall include but not be limited to the following:

(a) Drainage direction and discharge points from all applicable mining-related areas described in paragraph 1.a(1). (Site Coverage) above, including culvert and sump discharges from roads and rail beds and also from equipment and maintenance areas subject to storm runoff of fuel, lubricants and other potentially harmful liquids.

(b) Location of each existing erosion and sedimentation control structure or other control measures for reducing pollutants in storm water runoff.

(c) Receiving streams or other surface water bodies.

(d) Locations exposed to precipitation that contain acidic spoil, refuse or unreclaimed disturbed areas.

(e) Locations where major spills or leaks of toxic or hazardous pollutants have occurred.

(f) Locations where liquid storage tanks containing potential pollutants, such as caustics, hydraulic fluids and lubricants, are exposed to precipitation.

(g) Locations where fueling stations, vehicle and equipment maintenance areas are exposed to precipitation.

(h) Locations of outfalls and the types of discharges contained in the drainage areas of the outfalls.

(2) For each area of the facility that generates storm water discharges associated with the mining-related activity with a reasonable potential for containing significant amounts of pollutants, a prediction of the direction of flow, and an identification of the types of pollutants that are likely to be present in storm water discharges associated with the activity. Factors to consider include the toxicity of the pollutant; quantity of chemicals used, produced or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants. Flows with a significant potential for causing erosion shall be identified.

d) Inventory of Exposed Materials. An inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water method and location of onsite storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.

e) Spills and Leaks. A list of significant spills and leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility beginning 3 years prior to the effective date of this permit. Such list shall be updated as appropriate during the term of the permit.

f) Sampling Data. A summary of any existing discharge sampling data

describing pollutants in storm water discharges from the portions of the facility covered by this permit, including a summary of any sampling data collected during the term of this permit.

g) Risk Identification and Summary of Potential Pollutant Sources. A narrative description of the potential pollutant sources from the following activities: truck traffic on haul roads and resulting generation of sediment subject to runoff and dust generation; fuel or other liquid storage; pressure lines containing slurry, hydraulic fluid or other potential harmful liquids; and loading or temporary storage of acidic refuse or spoil. Specific potential pollutants shall be identified where known.

3) Measures and Controls. The permittee shall develop a description of storm water management controls appropriate for the facility and implement such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the permitted facility. The description of storm water management controls shall address the following minimum components, including a schedule for implementing such controls.

a) Good Housekeeping. Good housekeeping requires the maintenance of areas that may contribute pollutants to storm water discharges in a clean, orderly manner. These are practices that would minimize the generation of pollutants at the source or before it would be necessary to employ sediment ponds or other control measures at the discharge outlets. Where applicable, such measures or other equivalent measures would include the following: sweepers and covered storage to minimize dust generation and storm runoff; conservation of vegetation where possible to minimize erosion; watering of haul roads to minimize dust generation; collection, removal, and proper disposal of waste oils and other fluids resulting from vehicle and equipment maintenance; or other equivalent measures.

b) Preventive Maintenance. A preventive maintenance program shall involve timely inspection and maintenance of storm water management devices as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment and systems. Where applicable, such measures would include the following: removal and proper disposal of settled solids in catch basins to allow sufficient retention capacity; periodic replacement of siltation control measures subject to deterioration such as straw bales; inspections of storage tanks and pressure lines for fuels, lubricants, hydraulic fluid or slurry to prevent leaks due to deterioration or faulty connections; or other equivalent measures.

c) Spill Prevention and Response Procedures. Areas where potential spills that can contribute pollutants to storm water discharges can occur, and their accompanying drainage points shall be identified clearly in the storm water pollution prevention plan. Where appropriate, specifying material handling procedures, storage requirements, and use of

equipment such as diversion valves in the plan should be considered. Procedures for cleaning up spills shall be identified in the plan and made available to the appropriate personnel. The necessary equipment to implement a clean up shall be available to personnel.

d) Inspections. In addition to or as part of the comprehensive site evaluation required under paragraph 3.a.(4) of this section, qualified facility personnel shall be identified to inspect designated areas of the facility at appropriate intervals specified in the plan. The following shall be included in the plan:

(1) Active Mining-Related Areas and Those Inactive Areas Under SMCRA Bond Authority. The plan shall require quarterly inspections by the facility personnel for areas of the facility covered by pollution prevention plan requirements. This inspection interval corresponds with the quarterly inspections for the entire facility required to be provided by SMCRA authority inspectors for all mining-related areas under SMCRA authority, including sediment and erosion control measures. Inspections by the facility representative may be done at the same time as the mandatory inspections performed by SMCRA inspectors. Records of inspections of the SMCRA authority facility representative shall be maintained.

(2) Inactive Mining-Related Areas Not Under SMCRA Bond. The plan shall require annual inspections by the facility representative except in situations referred to in paragraph 3.a.(4)(d) below.

(3) Inspection Records. The plan shall require that inspection records of the facility representative and those of the SMCRA authority inspector shall be maintained. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections.

e) Employee Training. Employee training programs shall inform personnel responsible for implementing activities identified in the storm water pollution prevention plan or otherwise responsible for storm water management at all levels of responsibility of the components and goals of the storm water pollution prevention plan. Training should address topics such as spill response, good housekeeping and material management practices. The pollution prevention plan shall identify periodic dates for such training.

f) Record keeping and Internal Reporting Procedures. A description of incidents (such as spills, or other discharges) along with other information describing the quality and quantity of storm water discharges shall be included in the plan required under this part. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.

g) Non-storm Water Discharges.

(1) Certification. The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharges such as drainage from underground portions of inactive mines or floor drains from maintenance or coal handling buildings. The certification shall include the identification of potential significant sources of non-storm water discharges at the site, a description of the results of any test and/or evaluation, a description of the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the onsite drainage points that were directly observed during the test. Certifications shall be signed in accordance with Part IV.G.4. of this permit.

(2) Exceptions. Except for flows from fire fighting activities, authorized sources of non-storm water listed in Part I.F.2.a. that are combined with storm water discharges associated with industrial activity must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

(3) Failure to Certify. If the permittee is unable to provide the certification required (testing or other evaluation for non-storm water discharges), the Executive Secretary must be notified within 180 days after the effective date of this permit. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification shall describe: the procedure of any test conducted for the presence of non-storm water discharges; the results of such test or other relevant observations; potential sources of non-storm water to the storm discharge lines; and why adequate tests for such storm discharge lines were not feasible. Non-storm water discharges to waters of the State that are not authorized by a UPDES permit are unlawful, and must be terminated.

h) Sediment and Erosion Control. The plan shall identify areas that, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion and reduce sediment concentrations in storm water discharges. As indicated in paragraph I.F.3. above, SMCRA requirements regarding sediment and erosion control measures are primary requirements of the pollution prevention plan for mining-related areas subject to SMCRA authority. The following sediment and erosion control measures or other equivalent measures, should be included in the plan where reasonable and appropriate for all areas subject to storm water runoff:

(1) Stabilization Measures. Interim and permanent stabilization measures to minimize erosion and lessen amount of structural sediment control measures needed, including: mature vegetation preservation; temporary seeding; permanent seeding and

planting; temporary mulching, matting, and netting; sod stabilization; vegetative buffer strips; temporary chemical mulch, soil binders, and soil palliatives; nonacidic road surfacing material; and protective trees.

(2) Structural Measures. Structural measures to lessen erosion and reduce sediment discharges, including: silt fences; earth dikes; straw dikes; gradient terraces; drainage swales; sediment traps; pipe slope drains; porous rock check dams; sedimentation ponds; riprap channel protection; capping of contaminated sources; and physical/chemical treatment of storm water.

i) Management of Flow. The plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (other than those as sediment and erosion control measures listed above) used to manage storm water runoff in a manner that reduces pollutants in storm water runoff from the site. The plan shall provide that the measures, which the permittee determines to be reasonable and appropriate, shall be implemented and maintained. Appropriate measures may include: discharge diversions; drainage/storm water conveyances; runoff dispersion; sediment control and collection; vegetation/soil stabilization; capping of contaminated sources; treatment; or other equivalent measures.

4) Comprehensive Site Compliance Evaluation. Qualified personnel shall conduct site compliance evaluations at intervals specified in the plan, but in no case less than once a year. Such evaluations shall provide:

a) Areas contributing to a storm water discharge associated with coal mining-related areas shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. These areas include haul and access roads; railroad spurs, sidings, and internal haulage lines; conveyor belts, chutes and aerial tramways; equipment storage and maintenance yards; coal handling buildings and structures; and inactive mines and related areas. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures, as indicated in paragraphs 3.a.(3)(h) and 3.a.(3)(i) above and where identified in the plan, shall be observed to ensure that they are operating correctly. A visual evaluation of any equipment needed to implement the plan, such as spill response equipment, shall be made.

b) Based on the results of the evaluation, the description of potential pollutant sources identified in the plan, in accordance with paragraph 3.a.(2) of this section, and pollution prevention measures and controls identified in the plan, in accordance with paragraph 3.a.(3) of this section, shall be revised as appropriate within 2 weeks of such evaluation and shall provide for implementation of any changes to the plan in a timely manner. For inactive mines, such revisions may be extended to a

maximum of 12 weeks after the evaluation.

c) A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph 3.a.(4)(b) above shall be made and retained as part of the storm water pollution prevention plan for at least 3 years after the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with Part IV.G.4. (Signatory Requirements) of this permit.

d) Where compliance evaluation schedules overlap with inspections required under 3.a.(3)(d), the compliance evaluation may be conducted in place of one such inspection. Where annual site compliance evaluations are shown in the plan to be impractical for inactive mining sites due to the remote location and inaccessibility of the site, site inspections required under this part shall be conducted at appropriate intervals specified in the plan, but, in no case less than once in 3 years.

4. Numeric Effluent Limitations. There are no additional numeric effluent limitations beyond those described in Part I.E. of this permit.

5. Monitoring and Reporting Requirements.

a. Benchmark Analytical Monitoring Requirements. The permittee must monitor their storm water discharges associated with industrial activity at least quarterly (4 times per year) during years 2 and 4 of the permit cycle except as provided in paragraphs 5.a.(3) (Sampling Waiver), 5.a.(4) (Representative Discharge), and 5.a.(5) (Alternative Certification). The permittee is required to monitor their storm water discharges for the pollutants of concern listed in Table E. below. Reports must be made in accordance with 5.b. (Reporting). In addition to the parameters listed in Table E. below, the permittee must provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge sampled.

The results of benchmark monitoring are primarily for the permittee's use to determine the overall effectiveness of the SWPPP in controlling the discharge of pollutants to receiving waters. Benchmark values are not viewed as permit limitations. An exceedence of a benchmark value does not, in and of itself, constitute a violation of this permit. While exceedences of a benchmark value does not automatically indicate a violation of a water quality standard has occurred, it does signal that modifications to the SWPPP or more specific pollution prevention controls may be necessary.

Table E.
Monitoring Requirements for Coal Mining Facilities

Pollutants of Concern	Cut-Off Concentration
Total Recoverable Aluminum	0.75 mg/L

Total Recoverable Iron	1.0 mg/L
Total Suspended Solids	100 mg/L

1) Monitoring Periods. The permittee shall monitor samples collected during the sampling periods of: January through March, April through June, July through September, and October through December during the second and fourth years of this permit cycle.

2) Sample Type. A minimum of one grab sample shall be taken. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable. If storm water discharges associated with industrial activity commingle with process or nonprocess water, then where practicable permittees must attempt to sample the storm water discharge before it mixes with the non-storm water discharge.

3) Sampling Waiver.

a) Adverse Conditions. If the permittee is unable to collect samples within a specified sampling period due to adverse climatic conditions, thus a substitute sample shall be collected from a separate qualifying event in the next monitoring period and the data submitted along with the data for the routine sample in that period. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricanes, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

b) Low Concentration Waiver. When the average concentration for a pollutant calculated from all monitoring data collected from an outfall during the second year monitoring is less than the corresponding value for that pollutant listed in Table E. under the column Monitoring Cut-Off Concentration, the permittee may waive monitoring and reporting requirements for the fourth year monitoring period. The permittee must submit to the Executive Secretary, in lieu of the monitoring data, a certification that there has not been a significant change in industrial activity or the pollution prevention measures in area of the facility that drains to the outfall for which sampling was waived.

c) Inactive and Unstaffed Site. If the permittee is unable to conduct quarterly chemical storm water sampling at an inactive and unstaffed

site, the operator of the facility may exercise a waiver of the monitoring requirements as long as the facility remains inactive and unstaffed. The permittee must submit to the Executive Secretary, in lieu of monitoring data, a certification statement on the Storm Water Discharge Monitoring Report (SWDMR) stating that the site is inactive and unstaffed so that collecting a sample during a qualifying event is not possible.

4) Representative Discharge. If the permittee has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, discharge substantially identical effluents, the permittee may test the effluent of one of such outfalls and report that the quantitative data also applies to the substantially identical outfall(s) provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan. The permittee shall include the description of the location of the outfalls, explanation of why outfalls are expected to discharge substantially identical effluents, and estimate of the size of the drainage area and runoff coefficient with the SWDMR.

5) Alternative Certification. The Permittee is not subject to the monitoring requirements of this section provided that certification is made for a given outfall or on a pollutant-by-pollutant basis in lieu of monitoring reports required under paragraph b. below, under penalty of law, signed in accordance with Part IV.G.4. (Signatory Requirements). The Certification shall state that material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, industrial machinery or operations, or significant materials from past industrial activity that are located in areas of the facility within the drainage area of the outfall are not presently exposed to storm water and are not expected to be exposed to storm water for the certification period. Such certification must be retained in the storm water pollution prevention plan, and submitted to DWQ in accordance with Part II.D. of this permit. In the case of certifying that a pollutant is not present, the permittee must submit the certification along with the monitoring reports required under paragraph b. below. If the permittee cannot certify for an entire period, they must submit the date exposure was eliminated and any monitoring required up until that date. This certification option is not applicable to compliance monitoring requirements associated with effluent limitations.

b. Reporting. The permittee shall submit monitoring results for each outfall associated with industrial activity [or a certification in accordance with Sections (3), (4), or (5) above] obtained during the second year reporting period, on Storm Water Discharge Monitoring Report (SWDMR) form(s) postmarked no later than the 31st day of the following March. Monitoring results [or a certification in accordance with Sections (3), (4), or (5) above] obtained during the fourth year reporting period shall be submitted on SWDMR form(s) postmarked no later than the 31st day of the following March. For each outfall, one signed SWDMR form must be submitted to the Executive Secretary per storm event

sampled. Signed copies of SWDMRs, or said certifications, shall be submitted to the Executive Secretary at the address listed in Part II.D. of the permit.

c. Visual Examination of Storm Water Quality. The permittee shall perform and document a visual examination of a representative storm water discharge at the following frequencies: quarterly for active areas under SMCRA bond located in areas with average annual precipitation over 20 inches; semi-annually for inactive areas under SMCRA bond, and active areas under SMCRA bond located in areas with average annual precipitation of 20 inches or less; visual examinations are not required at inactive areas not under SMCRA bond.

1) Visual Monitoring Periods. Examinations shall be conducted in each of the following periods for the purposes of visually inspecting storm water runoff or snow melt: Quarterly-January through March; April through June; July through September; and October through December. Semi-annually—January through June and July through December.

2) Sample and Data Collection. Examinations shall be made of samples collected within the first 60 minutes (or as soon thereafter as practical, but not to exceed two hours) of when the runoff or snowmelt begins discharging. The examinations shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well-lit area. No analytical tests are required to be performed on the samples. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where practicable, the same individual will carry out the collection and examination of discharges for the life of the permit.

3) Visual Storm Water Discharge Examination Reports. Visual examination reports must be maintained onsite in the pollution prevention plan. The report shall include the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

II. MONITORING, RECORDING AND REPORTING REQUIREMENTS

A. Representative Sampling. Samples taken in compliance with the monitoring requirements established under *Part I* shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge. Sludge samples shall be collected at a location representative of the quality of sludge immediately prior to the use-disposal practice.

B. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under *Utah Administrative Code ("UAC") R317-2-10*, unless other test procedures have been specified in this permit.

C. Penalties for Tampering. The *Act* provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

D. Reporting of Monitoring Results. Monitoring results obtained during the previous month shall be summarized for each month and reported monthly on a Discharge Monitoring Report Form (EPA No. 3320-1), post-marked no later than the 28th day of the month following the completed reporting period. The first report for the July 2010 monitoring period is due by August 28, 2010. If no discharge occurs during the reporting period, "no discharge" shall be reported. Legible copies of these, and all other reports including whole effluent toxicity (WET) test reports required herein, shall be signed and certified in accordance with the requirements of *Signatory Requirements (see Part IV.G)*, and submitted to the Director, Division of Water Quality at the following address:

original to: Department of Environmental Quality
Division of Water Quality
195 North 1950 West
PO Box 144870
Salt Lake City, Utah 84114-4870

E. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Additional Monitoring by the Permittee. If the permittee monitors any parameter more frequently than required by this permit, using test procedures approved under *UAC R317-2-10* or as otherwise specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated. Only those parameters required by the permit need to be reported.

G. Records Contents. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements:
2. The individual(s) who performed the sampling or measurements;
3. The date(s) and time(s) analyses were performed;
4. The individual(s) who performed the analyses;
5. The analytical techniques or methods used; and,
6. The results of such analyses.

H. Retention of Records. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the Executive Secretary at any time. A copy of this UPDES permit must be maintained on site during the duration of activity at the permitted location.

I. Twenty-four Hour Notice of Noncompliance Reporting.

1. The permittee shall (orally) report any noncompliance which may seriously endanger health or environment as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of circumstances. The report shall be made to the Division of Water Quality, (801) 538-6146, or 24 hour answering service (801) 536-4123.

2. The following occurrences of noncompliance shall be reported by telephone (801) 536-4123 as soon as possible but no later than 24 hours from the time the permittee becomes aware of the circumstances:

   a. Any noncompliance which may endanger health or the environment;

   b. Any unanticipated bypass which exceeds any effluent limitation in the permit (See *Part III.G, Bypass of Treatment Facilities.)*;

   c. Any upset which exceeds any effluent limitation in the permit (See *Part III.H, Upset Conditions.*); or,

   d. Violation of a maximum daily discharge limitation for any of the pollutants listed in the permit.

3. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:

   a. A description of the noncompliance and its cause;

   b. The period of noncompliance, including exact dates and times;

   c. The estimated time noncompliance is expected to continue if it has not been corrected; and,

   d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

   e. Steps taken, if any, to mitigate the adverse impacts on the environment and human health during the noncompliance period.

4. The Executive Secretary may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Division of Water Quality, (801) 538-6146.

5. Reports shall be submitted to the addresses in *Part II.D, Reporting of Monitoring Results.*

J. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for *Part II.D* are submitted. The reports shall contain the information listed in *Part II.I.3.*

K. Inspection and Entry. The permittee shall allow the Executive Secretary, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,

4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the *Act*, any substances or parameters at any location.

III. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give advance notice to the Executive Secretary of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

B. Penalties for Violations of Permit Conditions. The *Act* provides that any person who violates a permit condition implementing provisions of the *Act* is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions of the Act is subject to a fine not exceeding $25,000 per day of violation; Any person convicted under *UCA 19-5-115(2)* a second time shall be punished by a fine not exceeding $50,000 per day. Except as provided at *Part III.G, Bypass of Treatment Facilities* and *Part III.H, Upset Conditions*, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

F. Removed Substances. Collected screening, grit, solids, sludges, or other pollutants removed in the course of treatment shall be buried or disposed of in such a manner so as to prevent any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter backwash shall not directly enter either the final effluent or waters of the state by any other direct route.

G. Bypass of Treatment Facilities.

1. Bypass Not Exceeding Limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to parts 2. and 3. of this section.

2. Prohibition of Bypass.

   a. Bypass is prohibited, and the Executive Secretary may taken enforcement action against a permittee for bypass, unless:

      (1) Bypass was unavoidable to prevent loss of human life, personal injury, or severe property damage;

(2) There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance, and

(3) The permittee submitted notices as required under section G.3.

b. The executive Secretary may approve an anticipated bypass, after considering its adverse effects, if the Executive Secretary determines that it will meet the three conditions listed in sections G.2a. (1), (2) and (3).

3. Notice.

a. Anticipated bypass. Except as provided above in section G.2. and below in section G. 3.b, if the permittee knows in advance of the need for a bypass, it shall submit prior notice, at least ninety days before the date of bypass. The prior notice shall include the following unless otherwise waived by the Executive Secretary:

(1) Evaluation of alternative to bypass, including cost-benefit analysis containing an assessment of anticipated resource damages:

(2) A specific bypass plan describing the work to be performed including scheduled dates and times. The permittee must notify the Executive Secretary in advance of any changes to the bypass schedule;

(3) Description of specific measures to be taken to minimize environmental and public health impacts;

(4) A notification plan sufficient to alert all downstream users, the public and others reasonably expected to be impacted by the bypass;

(5) A water quality assessment plan to include sufficient monitoring of the receiving water before, during and following the bypass to enable evaluation of public health risks and environmental impacts; and

(6) Any additional information requested by the Executive Secretary.

b. Emergency Bypass. Where ninety days advance notice is not possible, the permittee must notify the Executive Secretary, and the Director of the Department of Natural Resources, as soon as it becomes aware of the need to bypass and provide to the Executive Secretary the information in section G.3.a.(1) through (6) to the extent practicable.

c. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass to the Executive Secretary as required under Part II.I., Twenty Four Hour Reporting. The permittee shall also immediately notify the Director of the Department of Natural Resources, the public and downstream users and shall implement measures to minimize impacts to public health and environment to the extent practicable.

H. Upset Conditions.

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of paragraph 2. of this section are met. Executive Secretary's administrative determination regarding a claim of upset cannot be judiciously challenged by the permittee until such time as an action is initiated for noncompliance.

2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. An upset occurred and that the permittee can identify the cause(s) of the upset;

   b. The permitted facility was at the time being properly operated;

   c. The permittee submitted notice of the upset as required under Part II.I, Twenty-four Hour Notice of Noncompliance Reporting; and,

   d. The permittee complied with any remedial measures required under Part III.D, Duty to Mitigate.

3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

I. Toxic Pollutants. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of *The Water Quality Act of 1987* for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

J. Changes in Discharge of Toxic Substances. Notification shall be provided to the Executive Secretary as soon as the permittee knows of, or has reason to believe:

1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

   a. One hundred micrograms per liter (100 ug/L);

   b. Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;

   c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(7)* or (10); or,

   d. The level established by the Executive Secretary in accordance with *UAC R317-8-4.2(6)*.

2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

a. Five hundred micrograms per liter (500 ug/L);

b. One milligram per liter (1 mg/L) for antimony:

c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(9)*; or,

d. The level established by the Executive Secretary in accordance with *UAC R317-8-4.2(6)*.

K. Industrial Pretreatment. Any wastewaters discharged to the sanitary sewer, either as a direct discharge or as a hauled waste, are subject to Federal, State and local pretreatment regulations. Pursuant to Section 307 of *The Water Quality Act of 1987*, the permittee shall comply with all applicable federal General Pretreatment Regulations promulgated at *40 CFR 403*, the State Pretreatment Requirements at *UAC R317-8-8*, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the wastewaters.

In addition, in accordance with *40 CFR 403.12(p)(1)*, the permittee must notify the POTW, the EPA Regional Waste Management Director, and the State hazardous waste authorities, in writing, if they discharge any substance into a POTW which if otherwise disposed of would be considered a hazardous waste under *40 CFR 261*. This notification must include the name of the hazardous waste, the EPA hazardous waste number, and the type of discharge (continuous or batch).

IV. GENERAL REQUIREMENTS

A. Planned Changes. The permittee shall give notice to the Executive Secretary as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are not subject to effluent limitations in the permit. In addition, if there are any planned substantial changes to the permittee's existing sludge facilities or their manner of operation or to current sludge management practices of storage and disposal, the permittee shall give notice to the Executive Secretary of any planned changes at least 30 days prior to their implementation.

B. Anticipated Noncompliance. The permittee shall give advance notice to the Executive Secretary of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

C. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

D. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit.

E. Duty to Provide Information. The permittee shall furnish to the Executive Secretary, within a reasonable time, any information which the Executive Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Executive Secretary, upon request, copies of records required to be kept by this permit.

F. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Executive Secretary, it shall promptly submit such facts or information.

G. Signatory Requirements. All applications, reports or information submitted to the Executive Secretary shall be signed and certified.

1. All permit applications shall be signed by either a principal executive officer or ranking elected official

2. All reports required by the permit and other information requested by the Executive Secretary shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above and submitted to the Executive Secretary, and,

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

3. Changes to authorization. If an authorization under paragraph IV.G.2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph IV.G.2 must be submitted to the Executive Secretary prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under this section shall make the following certification:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

H. Penalties for Falsification of Reports. The *Act* provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $10,000.00 per violation, or by imprisonment for not more than six months per violation, or by both.

I. Availability of Reports. Except for data determined to be confidential under *UAC R317-8-3.2*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of Executive Secretary. As required by the *Act*, permit applications, permits and effluent data shall not be considered confidential

J. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the permittee of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the *Act*.

K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

L. Severability. The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

M. Transfers. This permit may be automatically transferred to a new permittee if:

1. The current permittee notifies the Executive Secretary at least 20 days in advance of the proposed transfer date;

2. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,

3. The Executive Secretary does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.

N. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by *UCA 19-5-117*.

O. Water Quality-Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations and compliance schedule, if necessary, if one or more of the following events occurs:

1. Water Quality Standards for the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.

2. A final wasteload allocation is developed and approved by the State and/or EPA for incorporation in this permit.

3. A revision to the current Water Quality Management Plan is approved and adopted which calls for different effluent limitations than contained in this permit.

P. Toxicity Limitation-Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include whole effluent toxicity (WET) testing, a WET limitation, a compliance schedule, a compliance date, additional or modified numerical limitations, or any other conditions related to the control of toxicants if toxicity is detected during the life of this permit.

GLOSSARY OF TERMS

A. Definitions.

1. The "30-day (and monthly) average" is the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.

2. The "7-day (and weekly) average" is the arithmetic average of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self- monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains the Saturday.

3. "Daily Maximum" ("Daily Max.") is the maximum value allowable in any single sample or instantaneous measurement.

4. "Composite samples" shall be flow proportioned. The composite sample shall, as a minimum, contain at least four (4) samples collected over the composite sample period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six (6) hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:

   a. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;

   b. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;

   c. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every "X" gallons of flow); and,

   d. Continuous collection of sample, with sample collection rate proportional to flow rate.

5. A "grab" sample, for monitoring requirements, is defined as a single "dip and take" sample collected at a representative point in the discharge stream.

6. An "instantaneous" measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.

7. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

8. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

9. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

10. "Executive Secretary" means Executive Secretary of the Utah Water Quality Board.

11. "EPA" means the United States Environmental Protection Agency.

12. "Act" means the "*Utah Water Quality Act*".

13. "Best Management Practices" ("*BMPs*") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. *BMPs* also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

14. "Coal pile runoff" means the rainfall runoff from or through any coal storage pile.

15. "*CWA*" means *The Federal Water Pollution Control Act*, as amended, by *The Clean Water Act of 1987*.

16. "Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharges. This term does not include return flows from irrigated agriculture or agriculture storm water runoff.

17. "Significant spills" includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under *Section 311* of the *Clean Water Act* (see *40CFR 110.10* and *40 CFR 117.21)* or *Section 102* of the *CERCLA* (see *40 CFR 302.4)*.

18. "Storm water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

19. "Waste pile" means any noncontainerized accumulation of solid, nonflowing waste that is used for treatment or storage.

20. "10-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable reoccurrence interval of once in 10 years. This information is available in *Weather Bureau Technical Paper no. 40,* May 1961 and *NOAA Atlas 2,* 1973 for the 11 Western States, and may be obtained from the National Climatic center of the Environmental Data Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

21. The term "coal preparation plant" means a facility where coal is crushed, screened, sized and cleaned, dried, or otherwise prepared and loaded for transit to a consuming facility.

22. The term "coal preparation plant associated areas" means the coal preparation plant yards, immediate access roads, coal refuse piles, and coal storage piles and facilities.

STATE OF UTAH

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION OF WATER QUALITY

INVOICE NUMBER: 07-191

INVOICE DATE: 6/15/2010

BILL TO:
Clay Wisdom, CFO
Carbon Resources, LLC
PO BOX 954
Sandia Park, NM 87047

REMIT TO: JALYNN KNUDSEN
DIVISION OF WATER QUALITY
P.O. BOX 144870
SALT LAKE CITY, UT 84114-4870

PERMIT NO:
Permit No. **UTG040028**

PAYMENT DUE DATE 7/15/2010

QTY	DESCRIPTION	PRICE	AMOUNT
1	UPDES General Permit Coverage No. UTG040028 Proposed Kinney No. 2 Mine Site near Scofield, UT	$ 1,020.00	$ 1,020.00
		TOTAL	**$ 1,020.00**

TELEPHONE 801-538-6146

FAX 801-538-6016

PLEASE REFERENCE INVOICE NUMBER ON CHECK

Air Quality Permit

FILE COPY

State of Utah
JON M. HUNTSMAN, JR.
Governor
GARY HERBERT
Lieutenant Governor

Department of
Environmental Quality
William J. Sinclair
Acting Executive Director
DIVISION OF AIR QUALITY
Cheryl Heying
Director

DAQE-AN0141180001-08

December 11, 2008

Gregory Hunt, Manager
Carbon Resources, LLC
P.O. Box 11789
Albuquerque, New Mexico 87192

Dear Mr. Hunt:

Re: Approval Order: New Approval Order for an Underground Coal Mine
Carbon County - CDS SM; ATT; NSPS; TITLE V Minor
Project Code: N014118-0001

The attached document is the Approval Order for the above-referenced project.

Future correspondence on this Approval Order should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any questions you may have on this project to Mr. Maung Maung. He may be reached at (801) 536-4153.

Sincerely,

M. Cheryl Heying, Executive Secretary
Utah Air Quality Board

MCH:MM:sa

cc: Southeastern Utah District Health Department
Mike Owens, EPA Region VIII

150 North 1950 West • Salt Lake City, UT
Mailing Address: P.O. Box 144820 • Salt Lake City, UT 84114-4820
Telephone (801) 536-4000 • Fax (801) 536-4099 • T.D.D. (801) 536-4414
www.deq.utah.gov
Printed on 100% recycled paper

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

APPROVAL ORDER: New Approval Order for an Underground Coal Mine

Prepared By: Maung Maung, Engineer
(801) 536-4153
Email: mmaung@utah.gov

APPROVAL ORDER NUMBER

DAQE-AN0141180001-08

Date: December 11, 2008

Carbon Resources, LLC

Source Contact
Ben Grimes
Phone: (970) 856-9477

M. Cheryl Heying
Executive Secretary
Utah Air Quality Board

ABSTRACT

Carbon Resources, LLC has submitted a Notice of Intent to construct an underground coal mine which is designated as Kinney 2 Mine. The operations consist of the underground coal hauling equipment and a surface coal handling system that will transfer coal from the underground mining operations through the portal to the coal stockpiles, reclaim system, screening, crushing and load-out facilities. The Kinney 2 Coal Mine will be located in Carbon County, near Schofield, Utah.

Carbon County is an attainment area of the National Ambient Air Quality Standards (NAAQS) for all pollutants. New Source Performance Standards (NSPS) 40 CFR part 60 subpart Y - Standards of Performance for Coal Preparation Plants applies to this source. Therefore, Title V of the Clean Air Act applies to this source. However, the source does not need to submit an application for Title V permit since it is a minor source. National Emission Standards for Hazardous Air Pollutants (NESHAP) and Maximum Available Control Technology (MACT) regulations do not apply to this source.

The emissions will result in the following, in tons per year, potential to emit totals: PM_{10} = 19.00.

The project has been evaluated and found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). A public comment period was held in accordance with UAC R307-401-7 and no comments were received. This air quality Approval Order authorizes the project with the following conditions, and failure to comply with any of the conditions may constitute a violation of this order.

General Conditions:

1. This Approval Order applies to the following company:

Facility Location	Corporate Office Location
Carbon Resources	Carbon Resources, LLC
Kinney 2 Mine	P.O. Box 11789
23 S. Carbon Avenue	Albuquerque
Price, Utah 84501	New Mexico 87192
Phone Number: (435) 609-9418	(970) 856-9477
Fax Number:	(970) 856-9478

The equipment listed below in this Approval Order shall be operated at the following location:

Plant Location:

Universal Transverse Mercator (UTM) Coordinate System: UTM Datum NAD27 4,397.238 kilometers Northing; 486.493 kilometers Easting; Zone 12

2. All definitions, terms, abbreviations, and references used in this Approval Order (AO) conform to those used in the UAC R307 and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.

3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.

4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved in accordance with R307-401.

5. All records referenced in this AO or in applicable NSPS, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request. Records shall be kept for the following minimum periods:

A.	Emission inventories	Five years from the due date of each emission statement or until the next inventory is due, whichever is longer
B.	All other records	Five years

6. Carbon Resources, LLC shall conduct its operations in Kinney 2 Mine in accordance with the terms and conditions of this AO, which was written pursuant to the company's Notice of Intent (NOI) submitted to the Division of Air Quality (DAQ) on February 21, 2008, and additional information given on September 29, 2008.

7. The approved installations shall consist of the following equipment or equivalent*:

A. One fabric filter bag-house located in screening and crushing facility

B. One fabric filter bag-house located in truck load-out facility

C. One fabric vent filter located near reclaim tunnel – ROM stockpile

D. One crusher (housed in-door) rated at 1000 tons per hour

E. One scalping screen (housed in-door) rated at 1000 tons per hour

F. Fuel tank farm

G. Stacking tubes with associated coal stockpiles

H. Treated, gravel haul roads

I. Associated conveyors

J. One reclaim tunnel with vibrating feeders for coal blending

* Equivalency shall be determined by the Executive Secretary.

Limitations and Tests Procedures

8. Visible emissions from the following emission points shall not exceed the following values:

   A. All crushers - 15% opacity

   B. All screens - 10% opacity

   C. All conveyor transfer points - 10% opacity

   D. All baghouses – 10% opacity

   E. Conveyor drop points - 10% opacity

   F. All other points - 20% opacity

   Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9.

   For sources that are subject to NSPS, opacity shall be determined by conducting observations in accordance with 40 CFR 60.11(b) and 40 CFR 60, Appendix A, Method 9.

9. The following production limit shall not be exceeded:

   3,000,000 tons of coal per rolling 12-month period

   To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of throughput shall be kept for all periods when the plant is in operation. Throughput shall be determined by examination of truck scale records. A supervisor shall monitor and maintain an operations log. The records of throughput shall be kept on a daily basis.

Roads and Fugitive Dust

10. The facility shall abide by all applicable requirements of UAC R307- 205 for Fugitive Emission and Fugitive Dust sources.

11. All unpaved roads and other unpaved operational areas that are used by mobile equipment shall be water sprayed and/or chemically treated to control fugitive dust. Treatment shall be of sufficient frequency and quantity to maintain the surface material in a damp/moist condition or unless it is below freezing. Records of water and/or chemical treatment shall be kept for all periods when the plant is in operation. The records shall include the following items:

    A. Date

    B. Number of treatments made, dilution ratio, and quantity

C. Rainfall received, if any, and approximate amount

D. Time of day treatments were made

E. Records of temperature if the temperature is below freezing

12. Visible fugitive dust emissions from haul-road traffic and mobile equipment in operational areas shall not exceed 20% opacity at any point. Visible emissions determinations for traffic sources shall use procedures similar to Method 9. The normal requirement for observations to be made at 15-second intervals over a six-minute period, however, shall not apply. Visible emissions shall be measured at the densest point of the plume but at a point not less than one half vehicle length behind the vehicle and not less than one half the height of the vehicle.

13. The paved haul road shall be watered, flushed, and/or broom swept as necessary to not exceed the opacity limits specified in condition #8.F. Records of cleaning paved roads shall be made available to the Executive Secretary or a representative upon request. Record shall include a period of two years before the date of request. The haul road speed shall be posted. It shall be 15 mph.

14. Control of disturbed or stripped areas is required at all times for the duration of the project/operation until the area is reclaimed. Areas disturbed during construction of the facility and not subjected to repeated disturbance shall be revegetated.

15. The storage piles shall be watered to minimize generation of fugitive dusts as dry conditions warrant or as determined necessary by the Executive Secretary. Records of water and/or chemical treatment shall be kept for all periods when the plant is in operation.

16. All above ground conveyors shall be covered. All reclaim points for the primary coal storage shall be below the stockpile.

17. The following transfer points shall be enclosed:

A. Each conveyor to conveyor transfer point

B. Reclaim conveyor from the primary coal stockpile to the stacking tube

C. All wash plant with associated screens, crushers and conveyors

18. Water sprays or chemical dust suppression sprays shall be installed at the following points to control fugitive emissions:

A. All crushers

B. All screens

The sprays shall operate whenever dry conditions warrant or as determined necessary by the Executive Secretary.

Fuels

19. The owner/operator shall use only #2 fuel oil or lighter as a primary fuel in diesel engines.

20. The sulfur content of any fuel oil or diesel burned shall not exceed 0.5 percent by weight for diesel fuels consumed in all diesel engines. Sulfur content shall be determined by ASTM Method D-4294-89 or approved equivalent. Certification of sulfur content shall be either by source's own testing or test reports from the fuel supplier. Records of test report on sulfur content shall be available on-site for each load delivered.

Federal Limitations and Requirements

21. In addition to the requirements of this AO, all applicable provisions of 40 CFR 60, NSPS Subpart A, 40 CFR 60.1 to 60.18 and Subpart Y, 40 CFR 60.250 to 60.254 (Standards of Performance for Coal Preparation Plants) apply to this installation. The facility must operate in accordance with the most current version of 40 CFR 60 applicable to this source. The following emission points are subject to Subpart Y:

    A. All crushers (above ground)

    B. All screens (above ground)

    C. All conveyors (above ground)

Records & Miscellaneous

22. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded.

23. The owner/operator shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

24. The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring.

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the DAQ. The UAC R307 rules used by DAQ, the NOI guide, and other air quality documents and forms may also be obtained on the Internet at the following web site:

http://www.airquality.utah.gov

The annual emissions estimation below includes mobile equipment and associated fugitive dust emissions. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, non-attainment area, maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.

The Potential To Emit (PTE) emissions for Carbon Resources, LLC, Kinney 2 Mine are currently calculated at the following values:

	Pollutant	Tons/yr
A.	PM_{10}	19.00

UDOT Highway Access Permit

State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

DEPARTMENT OF TRANSPORTATION

JOHN R. NJORD, P.E.
Executive Director

CARLOS M. BRACERAS, P.E.
Deputy Director

March 14, 2011

Carbon Resources
P.O.Box 954
Sandia Park, NM 87047

To Whom It May Concern:

The Utah Department of Transportation has reviewed the access plans submitted by Ben Grimes for the access and turn lanes for your project near Scofield Utah. The plans meet UDOT criteria for access for this type of operation. Final, P.E. stamped plans must be submitted for final approval when the access application is submitted. An Access Approval permit will need to be obtained from UDOT prior to any construction. There will be a $475.00 permit fee for this application. Once the Access Approval permit is issued the contractor who is going to build the access will be required to obtain an Encroachment permit. This will require a $30.00 permit fee along with a $50,000.00 3year bond and a certificate of insurance naming UDOT as additionally insured. Please refer to UDOT web site for details. (www.udot.utah.gov).

If you have questions or need additional information please don't hesitate to call. I can be reached at 435-636-1402, 435-650-1477 cell, or via email at dstapley@utah.gov.

Sincerely,

Dale Stapley
Region Right of Way Coordinator

MSHA Permit

Exhibit 4

MSHA ID Number

Date: Wed, Feb 9, 2011 3:51 pm

Dear Bill Reeves:

This email is to verify that the Kinney # 2 operation has been assigned the MSHA Identification Number designated below. The number is assigned to the operation located at or near Scofield, UT.

Your MHSA Mine ID: 42-02566

The provisions of 30 CFR, Part 41 require the filing of a Legal Identity Report (MSHA Form 2000-7) in your respective District Office within 30 days of the opening of the operation. Please refer to the regulation at http://www.msha.gov/30cfr/41.11.htm. The newly assigned mine identification number is required to complete the report. This report may be filed electronically at the MSHA website address http://www.msha.gov/forms/forms.asp.

As a mine operator, your company is accountable for the reporting requirements of 30 CFR, Part 50. Please reference the Federal Mine Safety and Health Regulations CFR 30, Part 50 at http://www.msha.gov/30cfr/50.0.HTM. Also, please reference 30 CFR Part 100, Criteria and Procedures for Proposed Assessment of Civil Penalties, for information on the process through which MSHA proposes civil penalties if a mine operator or contractor is cited for failure to comply with mandatory safety or health regulations.

Additionally, mine operators are required to comply with the provisions of 30 CFR Part 50 regarding hours worked, and injuries and occupational illnesses occurring to employees at these sites. Required reports are MSHA Form(s) 7000-1 (Mine Accident, Injury, and Illness Report) and 7000-2 (Quarterly Employment Report). One quarterly report is required for each mine having a Mine ID. Both reports may be filed electronically at the MSHA website address http://www.msha.gov/forms/forms.asp.

To view any forms submitted electronically, click on the link http://www.msha.gov/forms/forms.asp and scroll down and click on the link to 'Lookup previously filed forms'.

If you need further information or assistance, please contact your local MSHA office. Please reference district contact information at http://www.msha.gov/district/disthome.htm.

Sincerely,

Allyn Davis
Coal District 9
Coal Mine Safety & Health

U.S. Department of Labor

Mine Safety and Health Administration
P. O. Box 25367
Denver, Colorado 80225-0367
Coal Mine Safety and Health
District 9

FEB 15 2011

Bill Reeves
President
Carbon Resources LLC
P.O. Box 954
Sandia Park, NM 87047

RE: Kinney #2
ID No. 42-02566
Mine ID Request

Dear Mr. Reeves:

This is to acknowledge receipt of your electronically submitted Legal Identity Report Form 2000-7, signed by you on February 9, 2011, establishing a new mine ID for Kinney #2 mine. All future correspondence regarding this mine should reference the Federal Mine Identification Number, 42-02566.

When filing your Legal ID Report, be certain that all items are completed, if they are applicable. Item 9 should name the person with whom the District Manager should confer regarding plans. This person will be located at the mine and will most likely be the highest ranking official located there.

Items #9, #10 and #11 can be, but do not have to be, the same person. The person listed in Item #11 does not have to be located at the mine. This person will receive service of process, if necessary.

The following identifies the contacts for District Management and other necessary numbers:

Allyn C. Davis 303-231-5458
District Manager

Donald E. Gibson 303-231-5558
Assistant District Manager/Inspection Programs

William P. Knepp 303-231-5563
Assistant District Manager/Technical Programs

Qualification and Certification 303-231-5472

Fax Machine-District Office 303-231-5553

The enclosure also includes the New Mine Packet. This packet will assist with the reporting requirements of establishing the new mine.

Should our web site not be available to you, or if you have any questions, please contact Patricia Castelli at (303) 231-5556 or (303) 231-5458.

Sincerely,

Allyn C. Davis
District Manager

Enclosure

cc: Gregory Hunt, Consultant

EDocument ID: 1376547
EDocument Status: MsisLoaded
Current District: Denver, CO(C0900) Reassign District
Current Assigned Person: Reassign Person

MSIS Document ID: 4202566
Show Review History

E-Document Approved

This document has been loaded into MSIS. Your assigned Mine Id number is 4202566.

OK

Mine ID Request (7000-51)

New Mine Status

Status to create the mine with NewMine

Status Date 2/9/2011

Qualifying Questions

Is this a coal mine? Yes

Will this operation change location periodically? No

Mine Information

Operating Company Name Carbon Resources LLC Search for similar names

Mine/Plant Name Kinney # 2

Effective Date 02/09/2011

Mailing Address for Document Delivery P.O. Box 954 Sandia Park, NM 87047

Contact Official

Name Bill Reeves
Title President
Phone (505) 980-1841
Ext.
Fax
Email Address ghuntbbc@aol.com

Mine Location

Nearest Town Scofield
State UT
County Carbon

Submission

Submitted by Bill Reeves on 2/9/2011

Carbon County Conditional Use Permit

CONDITIONAL USE PERMIT
Carbon County Planning
120 East Main Street Price, Utah 84501

THIS CERTIFICATE ISSUED AS PER SECTION 5.4 AND 4.2.17 OF THE DEVELOPMENT CODE OF CARBON COUNTY TO:

CARBON RESOURCES, LLC
c/o Gregory Hunt
PO Box 950
Sandia Park, New Mexico 87047

GRANTING A CONDITIONAL USE PERMIT TO CONSTRUCT AND OPERATE A COAL MINE IN SECTIONS 32 AND 33, TOWNSHIP 12 SOUTH, RANGE 7 EAST.

DATED: September 20, 2010

EXACTIONS:

1. Prior to any Building Permits being approved or issued all fees shall be paid.

2. Approval by all Agencies that govern, including the Utah Division of Oil, Gas, and Mining, and the Utah Division of Environmental Quality shall be required prior to any Building Permits or Business License being issued.

APPROVED

Dave Levanger
Director of Planning

Utah DNR Div. of Water Rights, Small Dam Permit (Negative Determination)

GARY R. HERBERT
Governor
GREG BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Water Rights
KENT L. JONES
State Engineer/Division Director

August 31, 2010

Ben Grimes
Carbon Resources, LLC
P.O. Box 954
Sandia Park, NM 87047

Re: Application to construct a small dam - Kinny No. 2 Mine

We have completed our review of your application to construct a small dam in Carbon County, Utah (section 33, T12S, R7E, SLB&M); the proposed structure will impound 3.18 acre-feet of water.

According to the application and attached drawings, the reservoir will be dug into the natural ground with no water storage above the natural grade. As such, this facility will not be considered to be a dam and Dam Safety approval is not necessary.

Water right issues must be resolved with the South Eastern regional office in Price, Utah. They can be contacted at 435-613-3750.

Sincerely,

David K. Marble, P.E.
Assistant State Engineer / Dam Safety

DKM/jm

cc: Marc Stilson – Regional Engineer
Hansen, Allen & Luce

1594 West North Temple, Suite 220, PO Box 146300, Salt Lake City, UT 84114-6300
(telephone (801) 538-7240 • facsimile (801) 538-7467 • TTY (801) 538-7458 • www.waterrights.utah.gov

Utah Department of Commerce License Number

Exhibit 4

Utah Department of Commerce

Verification of Business Entity

Utah Business Search - Details

CARBON RESOURCES, LLC

Entity Number: 7201220-0161
Company Type: LLC - Foreign
Address: 34 VALLE HERMOSA SANDIA PARK, NM 84047
State of Origin: NV
Registered Agent: RONALD C BARKER
Registered Agent Address:
2870 S STATE ST Salt Lake City UT 84115

Status: Active

Status: Active *as of 04/05/2010*
Renew By: 12/01/2011
Status Description: Good Standing
Employment Verification: Not Registered with Verify Utah

History

Registration Date: 12/01/2008
Last Renewed: 01/24/2011

Additional Information

NAICS Code: 9999 **NAICS Title:** 9999-Nonclassifiable Establishment

Refine your search by:

- Search by:
- Business Name
- Number
- Executive Name
- Search Hints

Name:

Dwelling within 300 Feet Waiver Letter

February 9, 2009

Clay Wisdom, CFO
Carbon Resources, LLC
P.O. Box 11789
Albuquerque, NM 87192

Dear Mr. Wisdom:

As the owner of the property described on the attached Exhibit A, which property lies within 300 feet of the boundary of property upon which Carbon Resources, LLC seeks to secure a permit from the Utah Department of Oil, Gas and Minerals to conduct coal mining and reclamation activities, please be advised that we have no objection to those activities.

We waive any and all objections to your conducting coal mining and reclamation activities within 300 feet of our property.

Very truly yours,

L2H Enterprises, Inc.

By: Jim Levanger, President

Exhibit 4

US Fish & Wildlife Service

Nest 1451 Deterrent Action

Letter of Authorization

&

Utah Division of Wildlife Resources Concurrence

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Migratory Bird Permit Office, Region 6

IN REPLY REFER TO:
USFWS/PERMITS

MAILING ADDRESS:
Post Office Box 25486
Denver Federal Center (60154)
Denver, Colorado 80225

STREET LOCATION:
134 Union Blvd.
Lakewood, Colorado 80228

April 26, 2011

Gregory Hunt
Carbon Resources LLC
P.O. Box 954
Sandia Park, NM 87047

Dear Mr. Hunt:

The letter serves as authorization for you and any other persons under direct control of, under contract to, or employed by you, to carry out activities only to the extent necessary in accomplishing the purpose authorized below.

You are authorized to temporarily deter nesting activities of one (1) inactive Red-tailed Hawk (*Buteo jamaicensis*) or Swainson's Hawk (*Buteo swainsoni*) nest #1541, located at UTM coordinates 487008.6949 and 4397609.6045 Kinney No. 2 Mine, Carbon County, Utah during the 2011 breeding season. The nest must be verified that it is inactive before applying the nest deterrent.

This authorization expires 90 days from the date of this letter and is issued for this one nest only. If the deterring of nest activities does not occur, please notify this office within five (5) days.

You and any other persons under direct control of, under contract to, or employed by you, shall comply with all mitigation efforts coordinated and approved by the U.S. Fish and Wildlife, Ecological Services Field Office, Salt Lake City, Utah (801) 975-3330.

You and any other persons under direct control of, under contract to, or employed by you, shall implement the above activities, and monitor the status of the nest during the 2011 breeding season.

A narrative summary of all activities conducted under this authorization shall be sent to the Migratory Bird Permit Office, Denver, Colorado.

This authorization is contingent upon approval of the Utah Department of Natural Resources, and a copy shall accompany anyone exercising its authority.

Sincerely,

for Janell Suazo
Chief, Migratory Bird Permit Office

Gmail by Google

Ben Grimes <bagrimes@gmail.com>

[redacted]nney Mine Nest #1541

5 messages

Ben Grimes <bagrimes@gmail.com> **Wed, Apr 27, 2011 at 4:22 PM**
To: leroymead@utah.gov

We got the Letter of Authorization from the USFWS. The letter says that we need Utah Dept. of Natural Resources approval also. What do we need from DNR/DWR? Time is of the essence, we would like to do the nesting deterrent this weekend since we are getting late in the nesting season.

I will try to get you by phone also, but I hear you have a new assignment and may be very busy.

Thanks,
Ben Grimes

Leroy Mead <leroymead@utah.gov> **Thu, Apr 28, 2011 at 8:23 AM**
To: Ben Grimes <bagrimes@gmail.com>

Ben,

I feel like I've already given my approval. If you want something more formal, then it will take weeks to run it through our Salt Lake office.

Leroy

[redacted]35-613-3718 (office)
435-636-5359 (cell)

>>> Ben Grimes <bagrimes@gmail.com> 4/27/2011 4:22 PM >>>
[Quoted text hidden]

Ben Grimes <bagrimes@gmail.com> **Thu, Apr 28, 2011 at 12:24 PM**
To: Gregory Hunt <geohuntllc@gmail.com>, Joe Helfrich <joehelfrich@utah.gov>, nathan_darnall@fws.gov

[Quoted text hidden]

Ben Grimes <bagrimes@gmail.com> **Thu, Apr 28, 2011 at 12:24 PM**
To: Ben Grimes <ben.grimes@carbon.utah.gov>

[Quoted text hidden]

Ben Grimes <bagrimes@gmail.com> **Sat, Apr 30, 2011 at 11:23 AM**
To: Gregory Hunt <geohuntllc@gmail.com>

[redacted]---------- Forwarded message ----------
[redacted]om: **Leroy Mead** <leroymead@utah.gov>
Date: Thu, Apr 28, 2011 at 8:23 AM
Subject: Re: Kinney Mine Nest #1541
[Quoted text hidden]

EXHIBIT 5

Public Notices and Proof of Publication, Hearing Notices and Documentation

AFFIDAVIT OF PUBLICATION

STATE OF UTAH)

ss.

County of Carbon,)

I, Richard Shaw, on oath, say that I am the Publisher of the Sun Advocate, a twice-weekly newspaper of general circulation, published at Price, State a true copy of which is hereto attached, was published in the full issue of such newspaper for 4 (Four) consecutive issues, and the first publication was on the 24th day of June, 2008, and that the last publication of such notice was in the issue of such newspaper dated the 15th day of July, 2008.

Richard Shaw - Publisher

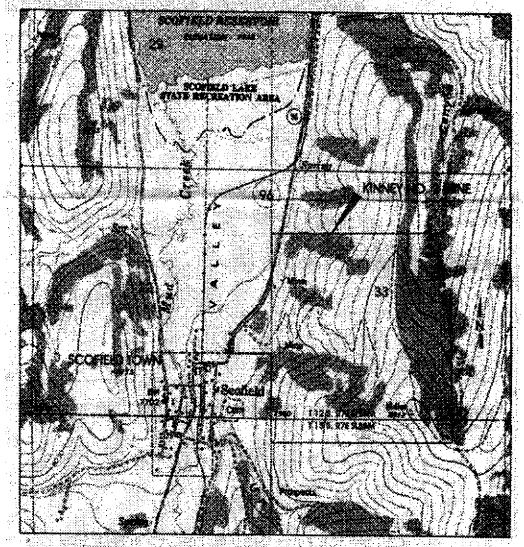
Subscribed and sworn to before me this 15th day of July, 2008.

Notary Public My commission expires January 10, 2007 Residing at Price, Utah

PUBLIC NOTICE

APPLICATION FOR PERMIT TO MINE COAL UNDER UTAH COAL MINING REGULATIONS R645 CARBON RESOURCES, LLC CARBON COUNTY, UTAH

Notice is hereby given that Carbon Resources, LLC., P.O. Box 11789, Albuquerque, New Mexico 87192, with Ronald C. Barker as Resident Agent, 2870 S. State Street, Salt Lake City, Utah 84225-3624, has filed an application with the Utah Department of National Resources, Division of Oil, Gas and Mining for a Permit to mine coal pursuant to R645 of the Utah Coal Program Regulations. The permit area is shown on the Scofield U.S. Geologic Survey 7.5-minute Quadrangle map.



The permit area affected is located in Carbon County, Utah as follows:

Township 12 South, Range 7 East, Salt Lake Base & Meridian

Section 32
E2SE4

Section 33
S2, S2N2

Township 13 South, Range 7 East,
Salt Lake Base & Meridian

Section 4
N2N2

Copies of the application can be reviewed at the following locations:

I, Richard Shaw, on oath, say that I am the Publisher of the Sun Advocate, a twice-weekly newspaper of general circulation, published at Price, State a true copy of which is hereto attached, was published in the full issue of such newspaper for 4 (Four) consecutive issues, and the first publication was on the 24th day of June, 2008, and that the last publication of such notice was in the issue of such newspaper dated the 15th day of July, 2008.

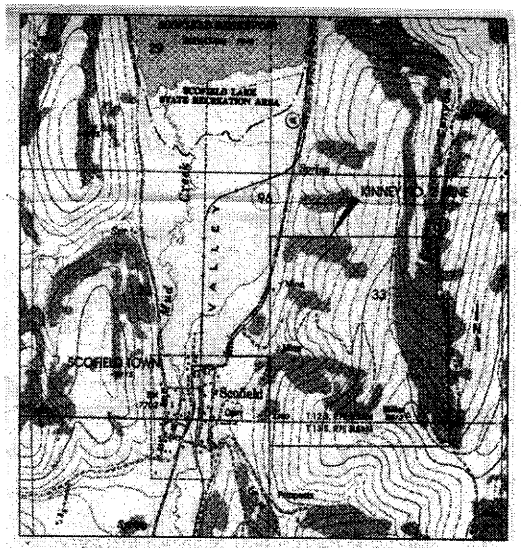
Richard Shaw - Publisher

Subscribed and sworn to before me this 15th day of July, 2008.

Notary Public My commission expires January 10, 2007 Residing at Price, Utah

Publication fee, $ 798.72

LINDA THAYN
NOTARY PUBLIC-STATE OF UTAH
845 EAST MAIN
PRICE, UTAH 84501
COMM. EXP. 01-10-2011



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Township 12 South, Range 7 East, Salt Lake Base & Meridian

Section 32
E2SE4

Section 33
S2, S2N2

Township 13 South, Range 7 East,
Salt Lake Base & Meridian

Section 4
N2N2

Copies of the application can be reviewed at the following locations:

Carbon County Recorder's Office
120 East Main Street
Price, Utah 84501

Utah Department of Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84116

Mining operations will be conducted within 100 feet of Utah Highway 96.

Written comments, objections, or requests for informal conferences on the application may be submitted to the Division of Oil, Gas and Mining at the address above.

Closing date for submission of such comments, objections and requests for an informal conference on this proposal must be submitted by August 14, 2008.

Published in the Sun Advocate June 24, July 1, 8 and 15, 2008.

AFFIDAVIT OF PUBLICATION

STATE OF UTAH)

ss.

County of Carbon,)

I, Richard Shaw, on oath, say that I am the Publisher of the Sun Advocate, a twice-weekly newspaper of general circulation, published at Price, State a true copy of which is hereto attached, was published in the full issue of such newspaper for 4 (Four) consecutive issues, and the first publication was on the 10th day of June, 2010, and that the last publication of such notice was in the issue of such newspaper dated the 1st day of July 2010.

Richard Shaw – Publisher

Subscribed and sworn to before me this 1st day of July, 2010.

Notary Public My commission expires January 10, 2011 Residing at Price, Utah

Publication fee, $ 798.72

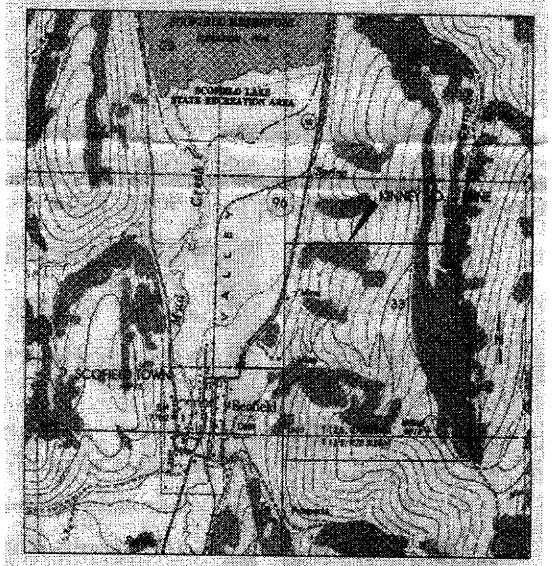
LINDA THAYN
NOTARY PUBLIC - STATE OF UTAH
645 EAST MAIN
PRICE, UTAH 84501
COMM. EXP. 01-10-2011

To view public notices on our Web site, please visit

PUBLIC NOTICE

**APPLICATION FOR PERMIT TO MINE COAL
UNDER UTAH COAL MINING REGULATIONS R645
CARBON RESOURCES, LLC
CARBON COUNTY, UTAH**

Notice is hereby given that Carbon Resources, LLC., P.O. Box 954, Sandia Park, New Mexico 87047 with Ronald C. Barker as Resident Agent, 2870 S. State Street, Salt Lake City, Utah 84225-3624, has filed an application with the Utah Department of National Resources, Division of Oil, Gas and Mining for a Permit to mine coal pursuant to R645 of the Utah Coal Program Regulations. The permit area is shown on the Scofield U.S. Geologic Survey 7.5-minute Quadrangle map.



The permit area affected is located in Carbon County, Utah as follows:

Township 12 South, Range 7 East, Salt Lake Base & Meridian

Section 32
E2SE4

Section 33
S2, S2N2

Township 13 South, Range 7 East,
Salt Lake Base & Meridian

Section 4
N2N2

Copies of the application can be reviewed at the following locations:

Carbon County Recorder's Office
120 East Main Street
Price, Utah 84501

Utah Department of Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84116

Mining operations will be conducted within 100 feet of Utah Highway 96.

Written comments, objections, or requests for informal conferences on the application may be submitted to the Division of Oil, Gas and Mining at the address above.

was published in the full issue of such newspaper for 4 (Four) consecutive issues, and the first publication was on the 10th day of June, 2010, and that the last publication of such notice was in the issue of such newspaper dated the 1st day of July 2010.

Richard Shaw – Publisher

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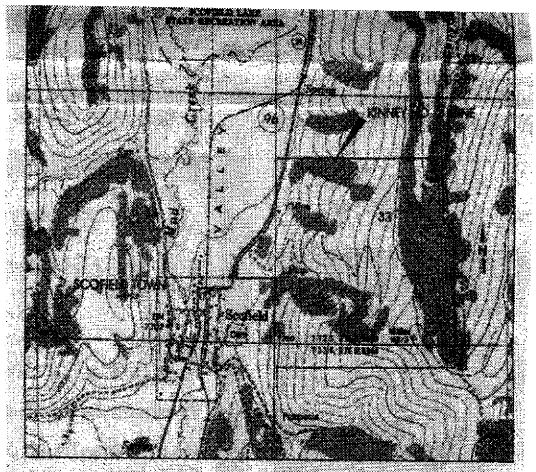
Notary Public My commission expires January 10, 2011 Residing at Price, Utah

Publication fee, $ 798.72

LINDA THAYN
NOTARY PUBLIC - STATE OF UTAH
845 EAST MAIN
PRICE, UTAH 84501
COMM. EXP. 01-10-2011

To view public notices on our Web site, please visit



The permit area affected is located in Carbon County, Utah as follows:

Township 12 South, Range 7 East, Salt Lake Base & Meridian

Section 32
E2SE4

Section 33
S2, S2N2

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Salt Lake Base & Meridian

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120 East Main Street
Price, Utah 84501

Utah Department of Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84116

Mining operations will be conducted within 100 feet of Utah Highway 96.

Written comments, objections, or requests for informal conferences on the application may be submitted to the Division of Oil, Gas and Mining at the address above.

Closing date for submission of such comments, objections and requests for an informal conference on this proposal must be submitted by August 1, 2010.

Published in the Sun Advocate June 10, 17, 24 and July 1, 2010

EXHIBIT 6

Soils Report and Appendices

APPENDIX 1: ACZ Spreadsheets &Lab Sheets

APPENDIX 2: IML Analysis Sheets

APPENDIX 3: Field Pedon Descriptions

APPENDIX 4: Soil Pit Profile Photos

APPENDIX 5: Micromonolith Photos

APPENDIX 6: Official Soils Series Descriptions

RECLAIMED COAL: SGS Lab Sheets

SOIL SURVEY REPORT

KINNEY No. 2 MINE

CARBON COUNTY, UTAH

Prepared for:
Carbon Resources, LLC
PO Box 1789
Albuquerque, NM 87192

Prepared by:
Bruce Chesler
PO Box 355
Escalante, Utah 84726

November 6, 2007

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Previous Soil Surveys	page 5
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Figure 1. Soil Map Unit ID Legend with Sampled Soil profile locations
Figure 2. Prime Farmland Map, from WEB Soil Survey

Table 1 Soil Analysis and Analytical Methods
Table 2 Utah Oil Gas and Mining Soil Suitability/Unsuitability Evaluation Guidelines
Table 3 Soil Map Unit Descriptions and Physical Parameters
Table 4 Soil Family Classifications by Pedon Location
Table 5 Proposed Surface Disturbances by Soil Map Unit
Table 6 Soil Suitability Data
Table 7 Erodibility Factor Calculations and Input Parameters
Table 8 Summary of Soil Limitation, Salvage Depths, and Salvageable Volumes

Appendix 1 ACZ Laboratories, Inc. Lab Analysis Spreadsheets (2006)

Appendix 2 Intermountain Laboratories, Inc. Lab Analyses Spreadsheets (2007)

Appendix 3 Soil Profile Descriptions

Appendix 4 Soil Profile Photographs

Appendix 5 Soil Micromonolith Box Photographs

Appendix 6 Official Soil Series Descriptions

Introduction

During October, 2006, 23 soil profiles were excavated by backhoe within an area containing previous underground coal mining disturbances on approximately 21 acres. An adjacent soil survey and sampling of 13 additional soil profiles was made during September, 2007 on an additional 16 acres to the south west. The southern portion of the survey area is dominantly comprised of disturbed lands containing reclaimed soil with alternative reclamation materials provided through the State of Utah Division of Oil Gas, and Mining Abandoned Mine Lands Program (AML) around 1986. The entire soil survey area, referred to in this report as Kinney No.2 Mine Soil Survey, is 36.7 acres in extent found along a 700 feet wide by approximately 1 mile long strip of private land adjacent to Highway 96. It is located approximately one quarter mile to the northeast of Scofield, Utah. The 27.3 acres shown on Figure 1 is that portion (sub-set) of the 36.7 acres survey area where disturbance is planned for construction of the surface facilities of the mine. The soil survey and sampling of soil profiles were made as part of Carbon Resources, LLC application to mine coal in this area, and is intended to identify and characterize the major soil types found within 36.7 acres of the coal mine permit area. The fieldwork portion of this soil survey was conducted by Bruce Chesler, an independent soil survey contractor, with the assistance of Greg Hunt of Carbon Resources, LLC. As a guide in planning the scope of work to be addressed in this soil survey report, Utah Division of Oil, Gas, and Mining (UDOGM) Guidelines of Management for Topsoil and Overburden (UDOGM, 2005) were consulted.

Objectives:

Map soils at Order 2 level on approximately 37 acres of the Kinney No.2 Mine Permit Area.

Describe and sample representative soil profiles at 6 inch to 24 inch depth increments in previously disturbed (AML) sites. Sample by horizon, and describe and classify soils to family level, in areas with undisturbed soil profiles.

Analyze soil physiochemical parameters for each sample according to methodologies suggested in 2005 UDOGM Guidelines for Management of Topsoil and Overburden.

Rate the soil's ability to be used as plant growth medium in soil reclamation for each soil map unit based on UDOGM guidelines.

Calculate an average salvageable topsoil or alternative reclamation material volume, for each soil map unit within the approximately 37 acres of the Mine Permit Area.

Make recommendations for management practices which may overcome any deficiencies in the quality and quantity of topsoil and alternative reclamation material which may be feasibly salvaged within the Mine Permit Area.

Soil Survey Setting

The survey area is located within portions of Sections 33 and 28, T 12 S, R 7 E, approximately one quarter mile northeast of Scofield, Utah. Elevations range between 7500 and 7900 feet. Previous coal mining in this area has affected over half of the natural landscape with abandoned mine portal and staging areas, coal mine dumps, roads and abandoned railroad grades, cut slopes and haul routes. There have been no previous attempts to salvage topsoil from the previous mining disturbance activities in this area. The present soil and alternate reclamation materials found on-site represents the extent of material available for post mining reclamation efforts at the Kinney No.2 permit area. As the AML alternative reclamation materials comprise a significant proportion of the materials found within the southern half of the survey area, a primary focus of this report will be to address their chemical properties and their plant re-growth potential. The 1986 AML reclaimed acreage generally contains coal/spoil/soil mixtures which I will refer to in this report as alternative reclamation materials. Soil Map Units used to describe these lands are referenced as either Mine Dumps (SCS, 1988) or Disturbed Lands, in this report. The alternative reclamation materials found in this area's backhoe excavations reveal layers of AML- placed subsoil materials covering coal that was historically dumped or spilled during mining, transport, or storage of coal and or coal abandoned in the old stock pile, along with buried natural subsoil horizons. This coal buried by AML will be referred to throughout this report as "reclaimed coal".

Access throughout the survey area was made by driving graded dirt roads on private lands, one which switchbacks up toward a ridgeline from the south end of the property, and one which leads south to north along the axis of the two mile long permit area. The geomorphology of the surrounding landscape is dominated by a fault block graben valley which contains Mud Creek drainage to the west, flowing north into Scofield Reservoir. Along the Mud Creek floodplain is an approximately one acre slice of the Kinney No.2 property, containing alluvial soils which I've sampled to represent the floodplain terrace soil types west of Highway 96. Steeper slopes comprised of colluvium and mass wasted landslide materials derived from Black Hawk Formation sedimentary rocks are the dominant and primary soil forming materials within the Order 2 soil survey area.

The colluvial material may contain less rock fragment content and finer soil materials in concave slope positions and at junctions of several side canyons, which dissect slopes within the survey area from the east. The sedimentary rock parent materials include limestone, calcareous sandstones, and siltstones. Mass wasting soil and colluvial deposits are noticeable within all soil map units and on various slope gradients across the soil survey area. These ancient landslide deposits have randomly distributed soil and geologic parent materials across the survey area in a way which makes predicting soil depths, rock content, and textures of soil profiles challenging for me. The vegetation is characterized by sagebrush on west to southerly aspects of the mountainsides, and pockets of aspen forest with snowberry understory located on north to easterly facing

slopes. The previously disturbed AML reclamation lands are dominated by Rubber Rabittbush and Wyoming Big Sagebrush. Slope gradients are steepest along the east side of the survey area, with moderate to gently sloping areas along the lower side slope and toeslope positions to the west. Soils with rock fragment contents of over 40 percent in their profiles are common within the survey area on all aspects and across all slope shapes.

Previous Soil Surveys

The Order 3 soil survey which includes the Kinney No.2 Mine permit area was reviewed (SCS, 1988). Sheet #6 of the Carbon Area Soil Survey provides 4 map unit delineations mapped by SCS in the Kinney No.2 permit area, which includes six soil map unit components, or Soil Series, and one Miscellaneous Land type. The Trag-Croyden complex (Map Unit 117) represents much of the steeper mountain slope positions, and Trag-Bege-Senchert complex (Map Unit 118) occurs to a lesser extent on toeslope positions along the southern edge of the permit area. Silas loam and Silas-Brycan loams (Map Units 108, 109) are mapped along the one acre of the permit area found within alluvial bottomlands along Mud Creek. One Miscellaneous Land Type, Mine Dumps, was described in the SCS Soil Survey Report for the areas with previous coal mining disturbance.

Trag Series has recently been revised in its extent by NRCS soil scientists in the Carbon County Area, to characterize soil types found with granitic parent material. Tie Creek Series, classified as a Fine-loamy, Typic Argiustoll, is a Soil Series which has been established in other portions of Carbon County. This Series is currently being used to represent sedimentary rock influenced soils found with sagebrush vegetation in frigid soil temperature regimes (personal communications, Leland Sasser, NRCS Price Field Office). Sagebrush vegetation and a frigid soil temperature regime represent the dominant soil ecotypes and climate in this area. The Tie Creek soil profile is very deep, has an argillic subsoil horizon, and includes some calcium carbonate accumulations in its subsoil. Croyden Series, a fine-loamy, Typic Argicryoll, is mapped by SCS on aspen forested sites in this area, and is usually about 50 inches to weathered sandstone bedrock and has an argillic horizon in the subsoil. The Bege soil Series is shallow to sandstone bedrock, and was not found within backhoe excavations to be a representative soil type along colluvium dominated lower side slopes. Senchert Series is a moderately deep to bedrock (20 to 40 inches) soil found under aspen understory, and occurs occasionally on spurs of ridges in this survey area. Official Soil Series descriptions from Carbon Area Soil Survey of several of these related soil types are included in Appendix 6.

There has been no attempt in this report to match soil profile descriptions described in the field to the Soil Series level of soil classification. The focus of this report is to identify

and rate soil properties as they affect feasible topsoil salvage operations. Soil family level classifications were used in documenting soil types.

Methods

In October 2006, 1:24,000 aerial photographs and mine plan schematic maps were reviewed. On a 1:6,000 scaled base map of the survey area, preliminary soil map unit boundaries were drawn. These map units were designed primarily with the intent to separate areas of previous surface disturbances (mainly alternative soil reclamation materials) from natural soil areas. The remote sensing effort was further refined during October 2007, with use of Utah State's (AGRC) high resolution aerial orthophotographs, which examination of has provided more accurate determinations for the extent of AML and other surface disturbances (Ben Grimes, personal comm.). Other factors influencing soil map unit design are slope gradients, aspect, and vegetation changes. The soil map units are designed to accommodate the intent of this project's objective of evaluating the major soil type's ability to be salvaged feasibly and then to be used as a plant growth medium in reclaiming this site. Slopes with steeper than 50 percent gradient, or soils with greater than 50 percent coarse fragments in their profile are regarded as impractical for conventional bulldozer scraping and feasible topsoil salvage practices, and were therefore not sampled in this survey.

On October 15, I met with Greg Hunt of Carbon Resources LLC and backhoe operator Mike Erkkila of Scofield, and began a field reconnaissance of pre-delineated soil map units by driving two access roads which bisect the survey area. Where available, road cut exposures were taken advantage of by cutting back with shovels and backhoe, to sample and describe soils within the survey area. A minimum of one representative soil profile was chosen for each map unit, and in the case of previously disturbed areas, the density of soil backhoe pits was increased due to the greater variability of these soil types. A total of 18 soil profiles were excavated and recorded during the following three days according to A Field Guide for Describing and Sampling Soils Version 2.2 (Schoeneberger, et al., 2005). Photographs were taken of each soil pit, and micromonolith sample boxes were assembled from each soil profile, photographed, and then stored for reference.

An average of 4 to 5 sample increments of soil materials and coal samples were taken from each soil profile, placed in gallon-sized plastic bags, and shipped to ACZ Laboratories, Inc. (ACZ) in Steamboat Springs. The amount of soil samples sent to the lab total 96 increments, and the number of coal samples sampled within five of the soil profiles total six. On November 3, 2006, all 102 of the samples had been received by ACZ. Samples were analyzed according to UDOGM Guidelines (Topsoil Guidelines, Tables 2 and 3, 2005) and results were reported on December 21, 2006.

An additional sampling and soil survey trip was made to Kinney No.2 soil survey area during September, 2007. This 3 day sampling excursion was dedicated to describing the

soil resources of the Hansen Surface (about 15.3 acres) located to the south and west of the 2006 sampling area. During this trip, a partial review of the soil profiles excavated during 2007 was made on-site with UDOGM soil scientist Priscilla Burton. Thirteen additional soil profiles were excavated by backhoe, and a total of 52 soil horizons, including 2 coal buried samples, were delivered to Intermountain Laboratories, Inc. (IML), Sheridan Wyoming on September 8. Results of the IML lab analyses were made available on Sept. 18, 2007.

Laboratory Analysis and Data Interpretation

Laboratory analysis of soil samples collected from 31 backhoe pits, hand-dug holes, and road cut excavations were conducted to determine chemical and physical properties of soils within the 36.7 acre Kinney No.2 soil survey area. Areas of previously disturbed land found within the southern portion of the soil survey area containing a majority of the planned coal mining building facilities were given closer scrutiny by increasing the soil sampling frequency. The laboratory analyses performed on all of the soil samples and the associated coal samples are provided in Table 1. In addition to the standard UDOGM lab parameter for topsoil suitability, Acid-Base Potential, Boron, Selenium, and Sulfur, and Total Organic Carbon percentages were analyzed for coal samples taken at 9 sample locations and for the 13 associated soil horizons (AML) at the following sites: D-3, D-4, D-9A, D-9B, and D-11, 06 –SP-07, 13-SP-07.

These data, along with soil profile and map unit descriptions, were used to classify soil types (USDA, 2006) and to assess the suitability of soils as primary plant growth medium for reclamation. The Utah Division of Oil, Gas, and Mining topsoil suitability ratings are listed in Table 2. Soil suitability criteria and four rating categories are also provided in Table 2. Based on numeric values assigned to each category (1 to 4), an average (or overall), cumulative, and maximum (highest) score determines the ultimate rating for each sample. However, some parameters are more important than others and some plant growth limiting factors may be readily overcome using proper management practices. For instance, available water holding capacity and soil erodibilty (K-factor), when adjusted for the higher coarse fragment content of these particular soils, is often rated less than if only the fine earth fraction of the soils are considered. The higher percentage of rock volume found in these soils may contain additional pockets of moisture beneath them, which are stored and used by plants during dryer periods of the year. Also, the higher coarse fragment contents of soil effectively shelter silty and other finer-textured soil particles from wind and water erosion.

Estimates of soil available water holding capacity (AWHC) were made using Saxton, et al. SPAW Soil Modeling Calculator, available on the Web. Permeability class (Rawls et al. 1982), and hydrologic group (Rawls et al. 1982) were based on soil texture of the major component of each soil map unit and adjusted for coarse fragment contents. The procedures found in Soil Survey Manual (USDA 1993b) were used to estimate surface

runoff class. The estimated root restricting depths were based on soil profile observation in the field, by such characteristics rock distribution, or bedrock layers.

The soil erodibility factors (K factors) were calculated based on the numerical representation of the nomographs typically used to calculate the erodibility of the fine earth fraction (Kf) and entire soil including rock fragments (Kw). This calculation involves the use of several variables including: the percentage of silt and very fine sand, soil organic matter, soil structure, and permeability. The procedures and calculation used to estimate the soil erodibility factors are provided in the National Soil Survey Handbook (USDA 1993a pages 618-30 and 618-32). The higher the K value, the more susceptible the soil is to sheet and rill erosion by water.

Soil Survey Results

Six soil map units were identified at the Order 2 level on 36.7 acres of the permit area. Figure 1 shows the location of the Kinney No.2 Mine Order 2 Soil Survey area, Soil Map Unit Identification Legend, and 31 of 36 soil sample site locations. Five locations are north of the present permit application boundary and not shown on this map. The Soil Map Unit ID Legend includes 5 natural soil map units and two previously disturbed map units. Family level soil classifications are provided for each of the natural soil map unit components. Three slope breaks, A: 0-35 percent, and B: 35-70 percent, C: 0-3 percent, were used to differentiate natural soil mapping units. Two slopes breaks, 0-20 percent, and 20-50 percent were used to differentiate the Disturbed Lands (DA, DB) map units. Of the 31 soil sample locations, 16 are located within previously disturbed/reclaimed areas and 15 were sampled from non-disturbed, natural soil landscapes.

Important and prime farmland determinations for this area were assessed during September 2007 using the NRCS WEB SOIL SURVEY. Figure 2. Contains a page printed form this website listing the Soil Map units found in the area of this soil survey, and their Prime Farmland suitability ratings (NRCS, 2007). There are no prime farmland soils or soils of statewide importance found within areas of concern in this soil survey report, primarily limited by a cold climate (growing season length), slope steepness and rock fragment contents.

The laboratory data from ACZ (2006 sampling, including 5 sample sites located outside of present permit application) are presented in Appendix 1. Intermountain Laboratories, Inc. data (from 2007) are shown in Appendix 2. Soil pedon descriptions for the 36 profiles are provided in Appendix 3. Soil profile photographs with sampled depth increments are shown in Appendix 4. Soil micromonolith box samples for the 36 sites are provided in Appendix 5. Appendix 6 contains three Official Soil Series Descriptions which closely resemble soils described in this report, and are published in the Soil Survey of Carbon Area, Utah Report (SCS, 1988).

Table 1 lists the soil analyses and the laboratory methods used by ACZ and IML to determine soil physiochemical properties. Table 3 shows the six Map Units, their major components, and the physical parameters typically used to assess impacts to soil resources and feasible soil management and handling options. Table 4 identifies each soil sample site with its family taxonomic classification. Classifications for profiles described within previously disturbed areas are listed as Disturbed Area Soils. Table 5 lists the soil map unit delineations by their acreage. Table 6 contains the laboratory data used to assess soil suitability and the various rating (highest, average, and cumulative ranking) based on comparison with the UDOGM topsoil suitability rating guideline provided in Table 2. Table 7 contains soil erodibility (K factor) calculations and input parameters. Table 8 is a summary of all of the identified soil limitations, and estimated soil salvage depth and salvage volumes by soil map unit.

Two Soil Orders were described within the undisturbed lands (Map Units 1B, 2A, 2B, 3A) of Kinney No.2 Mine Order 2 soil survey area, Mollisol, and to a lesser extent, Alfisol. Inclusions of Inceptisols were also noted. A 10 –15 inch dark topsoil layer (A horizon) with 2 to 3 feet of very stony to bouldery coarse textured subsoil (B to C horizons) characterize the soils of these areas. Soils with over 10 percent coal fines on the surface are common in the disturbed/reclaimed area of the survey area, and these "reclaimed coal" dump areas are identified in this report as Disturbed Area Soils (Map Units DA and DB). It has proven difficult for me to model or predict the depths to and extent of "reclaimed coal" fines and chunks that occurs within the previously disturbed area. Soils located within Disturbed Areas contain a highly variable mixture of soil and rock material, mixed with "reclaimed coal" deposits. A common feature of both undisturbed and reclaimed sites across the survey area is the high percentage of coarse fragments found throughout these profiles. Exceptions to this case are found in soils located on concave lower slope positions (Map Unit 1B), and along floodplain terraces and drainages (map unit 3A).

Following are brief descriptions of the six map units.

DA. Disturbed area soils, 0-20 percent slopes

This map unit occurs in previously disturbed AML reclamation area throughout the soil survey area which includes former dumps, portals, and staging areas, and along abandoned haul and rail roads. The entire area appears to have been regraded since 1986 to conform to the moderate to slightly sloping toeslopes in context with the adjacent natural slope gradients. Mixtures of soil with alternative reclamation materials from the area are combined with "reclaimed coal" chunks and fines, and are distributed in a way making soil taxonomy inapplicable. Vegetation is a mixture of seeded grasses and Rubber rabbitbrush. Slope gradients are between 0 and 20 percent, the soil is well drained, and has a moderate permeability. Some concrete foundations of abandoned structures are found within this map unit. Eighty percent of the map unit are classified

Disturbed land soils, and 10 percent each are Fine-loamy and Loamy-skeletal, Typic Haploxerolls found on undisturbed soil landscapes with sagebrush and grass vegetation.

DB. Disturbed area soils, 20-50 percent slopes

This map unit is also located within previously disturbed AML reclamation areas, located primarily in the southern portion of the survey area. Parent materials include sandstone, limestone, and mudstones, Slopes range between 20 and 50 percent and soils are well drained and have a moderate permeability. There is a mixture of reclaimed materials, up to 20 inches depth comprised of subsoil with "reclaimed coal" covering the natural soil profiles. Depths of the reclaimed material covering the natural soils profile vary considerably across the map unit, and are not easily predicted by surface features. Eighty percent of this map unit is comprised of Disturbed land soil containing "reclaimed coal" and alternative reclamation materials. Vegetation is comprised of seeded grasses and Rubber Rabbitbrush, with a small proportion of sagebrush and aspen trees. Included are 10 percent Loamy-skeletal Typic Haploxeroll soils on undisturbed lands, with a mix of sagebrush and aspen vegetation. Another ten percent inclusion are Fine-loamy Typic Argixeroll soils on undisturbed land found on concave slope positions.

1B. Typic Haplocryoll loamy skeletal – Typic Argicryoll, coarse-loamy Complex, 35-70 percent slopes

This soil map unit is found on steeper mountain side slopes of the permit area with aspen vegetation and slopes above 35%. The parent materials are colluvial sandstones, shale, and limestones from the Blackhawk Formation. Soils are moderately deep to deep, well drained, and have a moderate permeability. Typic Haplocryoll, loamy-skeletal comprise 50 percent of this map unit. Typic Argicryoll, coarse-loamy comprise 40 percent of this map unit. Included in the map unit are ten percent Pachic Haplocryoll fine loamy soils located on concave slope positions.

2A. Typic Argixeroll, loamy-skeletal – Typic Haploxeroll, loamy-skeletal Complex, 0-35 percent slopes

This map unit is located on colluvial side slopes and toeslopes with sagebrush vegetation and slopes less than 35%. Soils are deep to very deep, well drained, and have a moderate permeability. Soils with south to westerly aspects under sagebrush vegetation types in this area have a frigid temperature regime. Loamy–skeletal, Typic Argixerolls comprise 50 percent of this map unit, and Fine-loamy Typic Haploxeroll comprise 35 percent of the map unit on concave slopes. Included in the map unit are 10 percent soils with pachic epipedons on concave lower sideslopes (Senchert Series), and 5% soils that are shallow to bedrock on ridges and convex sideslopes (Bege Series).

2B. Typic Argixeroll, loamy-skeletal Consociation, 35 - 70 percent slopes

This map unit is found on steep colluvial sideslopes with sagebrush and grass dominated vegetation. Mixed sedimentary rocks are the parent materials. The south to westerly aspects have a frigid temperature regime. Slopes are between 35% and 70% and soils are moderately deep to deep and well drained, with a moderate permeability. Loamy-skeletal Typic Argixerolls comprise 80 percent of this map unit. Included in the map unit are 10 percent shallow to bedrock soils on convex slopes, and 10 percent Pachic Haploxerolls on concave slope positions.

3A. Cumulic Argicryoll Fine-loamy, Consociation, 0-3 percent slopes

This map unit is of limited extent (0.8 acre) within the Kinney No.2 permit area, and is located west of Highway 96 on alluvial terrace bottomlands of the Mud Creek drainage. No backhoe pits were excavated in this map unit; soil sampling was by hand-excavated pits to 40 inches. The area is characterized by seasonally moist subsoil resulting from groundwater and Scofield Reservoir level fluctuations in the area. Soils are very deep, with stratified loam to silt loam textures, and are faintly mottled below 40 inches. Vegetation includes grass, sedges, and weeds. Ninety percent of this map unit is Silas Series soil types. Included in this map unit are five percent soils with 20 inches cover of coal fines with alternative reclamation material, found along depositional areas adjacent to the highway berms and associated drainage culverts, and five percent soils with a coarse- loamy particle size class in their control section.

Soil Salvage

The determination of soil suitability depends on the intended use of the soil. Soil intended for reclamation should have a sufficient depth and quantity to permit economic salvage and be of suitable quality and texture. Soils management considerations include the development of practical methods for soil salvage, stockpile construction, redistribution onto regraded spoil, seedbed preparation, erosion protection, and the rapid establishment of perennial and permanent vegetation.

Soil map unit salvageability, plant growth limiting factors, and the estimated volume of plant growth medium within the 27.3 acre Kinney No.2 Mine planned disturbance area provided in Table 8 which is a subset of the 36.7 soil survey area within the controlled property. These estimates were based on soil profile descriptions (Appendix 3), comparison of the suitability rating guidelines (Table 2) with physicochemical soils data (Table 6), size of the map unit within the proposed disturbance (Table 5), estimated depths of suitable soil in each map unit component, and the proportion of each map unit component for which soil salvage was considered feasible.

The factors limiting soil suitability in the 27.3 acre Kinney No.2 Mine Order 2 soil survey include Total Organic Carbon content (found in most alternative reclamation materials), available water holding capacity in the soils with over 40% coarse fragments, K-factor of the fine-earth fraction soil material of A horizons with minimal coarse fragment content, and slope gradients of over 50%. These limitations were identified based on the review of laboratory data and field description of coal distribution around and within the soil profiles, soil texture, and the ocular estimation for percentage rock content observed in the soil profiles. Slope gradients were determined using hand held clinometer.

Of the 154 samples tested within the 31 soil profiles, all tested good for electrical conductivity, SAR, and CaC03 percentage. All samples tested good for pH, with the exception of one sample (13-SP-07) which had pH values of slightly less then 6.5.

The water content, at saturation, of 151 of the samples rated good. Two sample increments from one site (1B-1) rated poorly, and one from site 13-SP-07 was fair, with saturation percentage of between 67 and 80 percent. The calculated available water capacity (AWHC), when corrected for coarse fragment content, for 87 of the soils rated good, 49 rated fair, and 18 were rated poor. The calculated soil erodibilty or K-factor for the fine earth fraction includes 123 rated good, 16 rated fair, and 15 rated poor. When coarse fragment contents are factored into the K-factor calculations, 144 samples are rated good, 3 are rated fair, and 7 are rated poor.

Soil textures of 152 of the coal and soil samples rated fair to good, with the majority of soils having a sandy loam, loam, or silt loam textures. Two of the subsurface soils rated poor with textures of silty clay (sites D-10, and 2A-5) and 2 coal samples (sites D-3 and 13-SP-07) had a poorly rated sand texture. The amount of very fine sand as proportion of total sand was generally between 15 and 30 percent.

Of 21 coal and coal- affected soil samples that were tested from 7 separate locations, all results for Boron results were good. They range between 0.46 and 2.30 mg/kg, well below the 5 mg/kg UDOGM acceptable limit. Of all of the selenium samples tested, 20 of 21 tested below lab detected limits. One sample, D-11 tested .007 mg/kg, below UDOGM acceptable standard of .15 mg/kg. Soil materials, alternative reclamation materials, and coal samples from 7 of the sample sites, are thus considered nonseleniferous and non-boroniferous.

The Acid- Base Potential for these 21 samples all rated good, with a lab calculations of between 5 and 38 available tons CaCo3 per1000 tons overburden in the samples. Total Organic Carbon for the 8 coal samples tested between 5 and 63 percent TOC. All of the "reclaimed coal" found buried within soil profiles, and mixed into the alternative reclamation material of soils of disturbed sites within the survey area, notwithstanding their distribution and thickness within soil profiles, are regarded as poorly rated in their topsoil suitability because of Total Organic Carbon percentages of over 10 percent. The issue of addressing the segregation and disposition of these coal fines is outside the scope of this soil survey report and will be a topic found in the topsoil salvage plan and the reclamation plan.

Based on these laboratory results and soil profile observations for 27.3 acres of the Kinney No. 2 Mine Order 2 soil survey area, the natural soil landscapes represented by Map units 2A, 2B, 1B, and 3A contain suitable growth medium of between 8 and 24 inches thickness that can be salvaged for reclamation of mine-related disturbances when found in contiguous areas of over an acre in extent. Map Units 1B and 2B, found on over 35 percent slopes, pose mechanical limitations in separating potential topsoil increments of less than 8 inch depth without inclusion of subsoil. Experience has shown that where less than about one foot of suitable materials are found on steep, rocky slopes, or close to shallow bedrock contacts, it would be impractical to strip, salvage and transport any of the suitable soils without including some subsoil material (B or C horizons) located at depths between one to two feet.

An exception to the available topsoil reclamation suggestion above is found within areas of disturbed land (map units DA and DB), where some of the alternative reclamation materials are mixed with varying amounts of "reclaimed coal" containing Total Organic Carbon contents of over 10 percent, and containing coal fines on the surface in excess of 15%. These soils are regarded as unsuitable for reclamation purposes, yet comprise significant proportions of the survey area. The variably-sized, buried bodies of "reclaimed coal" located within map units DA and DB may contain acid forming materials and should be contained separately from other suitable topsoil growth medium. However, based on the sample sites located within disturbed areas of this survey, the establishment of certain plants has successfully occurred in much of the previously disturbed area reclaimed by AML. The alternative topsoil materials used in 1986 may be argued as having had some success in providing adequate neutralizing affects when used in association with small amounts of coal fines (less than 15%) so that these materials

may repeatedly used, if necessary, as a source for additional alternative topsoil materials.

The exact extent of coal buried within previously disturbed Map units DA and DB cannot be precisely estimated by methodologies used to prepare this soil survey report. Additional core drilling in areas of previous disturbances and located within AML 1986 reclamation is recommended. This core drilling would allow for modeling of a better estimate of the quantities of "reclaimed coal" located in this area. Such an estimate of coal volumes could provide the information needed to decide whether economics of the stripping/ recovery of buried coal is feasible. In my judgment, potential additional reclamation materials could be made available from within map Units DA and DB if the isolation and recovery of "reclaimed coal" are deemed feasible. Separation of, and salvage for resale of the larger bodies of the "reclaimed coal" is perhaps an economically feasible management alternative. The removal from the AML areas of any potential acid toxicity resulting from "reclaimed coal" products provides assurance that buried "reclaimed coal" is isolated and separate from other nearby, suitable alternative reclamation topsoil materials.

According to the results of 154 soil sample analyses and a field survey of soil resources, an estimated 66.5 thousand cubic yards (yds^3) of suitable soil is salvageable within the 27.3 acres of Kinney No.2 Mine Order 2 soil survey area for use as plant growth medium for reclamation. Additional soil salvage volume may be possible if marginal soils (poorly rated soils by UDOGM Guidelines), along with use of some of the alternative reclamation materials mixed with coal fines, are considered necessary for overcoming deficiencies in topsoil balance. The plants presently growing on-site attest to the abilities of these previously disturbed lands alternative reclamation materials to grow vegetation.

Salvageable soil quantities may be more precisely estimated when detailed plans for the scheduling and mine development are completed. At that time, the detailed balance of salvaged soil materials and substrates can be calculated, and their storage or distribution can be determined and become part of the reclamation planning. Experience in soil salvage on large-scale mining projects has shown that field determination of soil salvage and suitability at the time of construction may be necessary. My recommendation is for a trained soil scientist to be present at time of soil salvage operations.

Potential Soil management Alternatives

Two potential reclamation uses for soils salvaged from Kinney No.2 Order 2 Soil Survey are:

1. Primary plant growth medium;
2. Seed, organic matter, and soil inoculum source

1. Primary Plant Growth Medium

Soils capable of acting as a primary plant growth medium for revegetation and reclamation are generally composed of soil materials rated as 1 or 2 according to the UDOGM guidelines. These soils are currently capable of supporting, in this case, native plant species that are adapted to conditions in the area. The physical and chemical properties of texture, pH, soluble salts content, sodium content, organic matter, etc. are in general not limiting for plant growth of native species. In some instances, soil material below the zone of active pedogenic processes should be suitable for reclamation.

2. Seed and Microbial Innoculum

The second subsidiary use of the surface soils is as a source for seed and plant propagules and microorganism inoculum. Seeds are generally contained in the top few inches of soils and are more abundant in the late summer and fall after flowering and seed set. Microbial inoculum is also contained in the top 2 to 8 inches of growth medium. Root propagules are typically found within the top 2 feet of the soil profile. Stockpiling of these plant propagules and microbial active materials significantly reduces their viability over time. If mine planning allows, soils should be applied within a short time following salvage and placed directly on regraded surfaces ('live handled').

Summary

There are some limitations to soil salvage in the proposed disturbed area within the Kinney No.2 Mine Order 2 soil survey area. The primary limitations are the available water holding capacity of soils containing greater than 50% rock content, slope gradients of over 50 percent affecting use of soil salvage machinery, soil materials with sandy textures, and an accurate determination of the quantity of coal found within the mixture of alternative reclamation materials located in Disturbed Lands Map Units DA and DB. Soil salinity, pH, calcium carbonate percentage, and plant nutrition do not pose any limitations to plant growth medium at the Kinney No.2 soil survey area. To ensure maximum utilization of the soils resource, soil salvage should be coordinated with the planning and construction phases of mining operations. A soil reclamation plan, at a later date, will have to address the issue of separation of the previous coal mining affected surfaces from natural topsoil, in the stripping and salvage operations.

Based on the soil descriptions in this report, the stripping, handling, storage, and application of the salvaged material can be estimated for reclamation planning. The estimated amount of salvageable soils was calculated based on depth and extent of soils found within the 36.7 acres within the Kinney No.2 Mine Order 2 soil survey area. All of the soil salvage estimates in this report are approximations.

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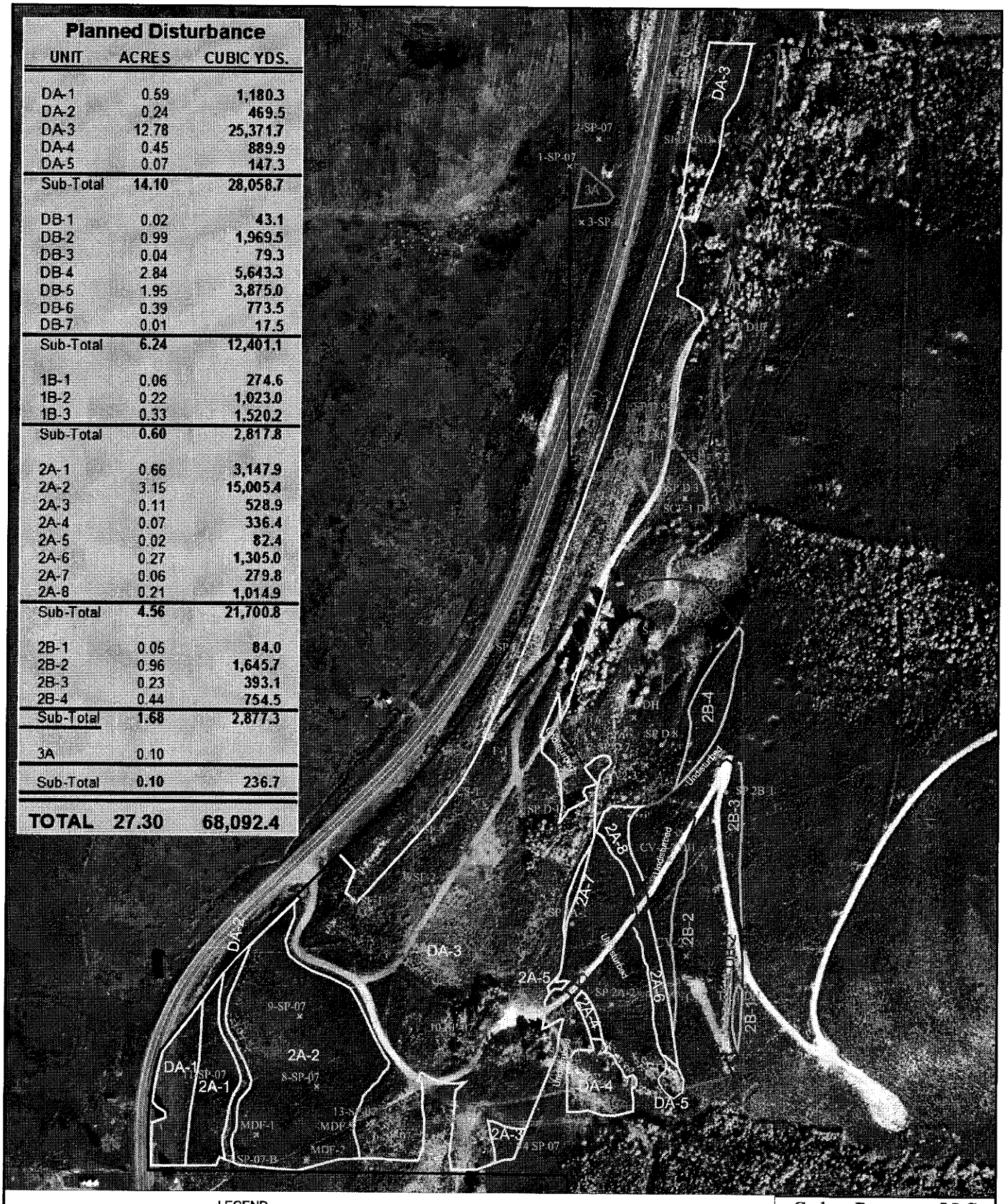
REPORT TABLES



Planned Disturbance

UNIT	ACRES	CUBIC YDS.
DA-1	0.59	1,180.3
DA-2	0.24	469.5
DA-3	12.78	25,371.7
DA-4	0.45	889.9
DA-5	0.07	147.3
Sub-Total	14.10	28,058.7
DB-1	0.02	43.1
DB-2	0.99	1,969.5
DB-3	0.04	79.3
DB-4	2.84	5,643.3
DB-5	1.95	3,875.0
DB-6	0.39	773.5
DB-7	0.01	17.5
Sub-Total	6.24	12,401.1
1B-1	0.06	274.6
1B-2	0.22	1,023.0
1B-3	0.33	1,520.2
Sub-Total	0.60	2,817.8
2A-1	0.66	3,147.9
2A-2	3.15	15,005.4
2A-3	0.11	528.9
2A-4	0.07	336.4
2A-5	0.02	82.4
2A-6	0.27	1,305.0
2A-7	0.06	279.8
2A-8	0.21	1,014.9
Sub-Total	4.56	21,700.8
2B-1	0.05	84.0
2B-2	0.96	1,645.7
2B-3	0.23	393.1
2B-4	0.44	754.5
Sub-Total	1.68	2,877.3
3A	0.10	
Sub-Total	0.10	236.7
TOTAL	**27.30**	**68,092.4**

LEGEND

SOIL TYPES and Planned Disturbance Areas

DB Disturbed Lands, 20-50% Slopes

1B Typic Argicryoll Consociation, 35-70% Slopes

2B Typic Argicryoll Consociation, 35-70% Slopes

SP 2A1 * Soil Survey Sample Pit 2006 Field Work w/Lab Analysis

6 SP 07 Soil Survey Sample Pit 2007 Field Work w/Lab Analysis

WSF-2 Soil Stability Sample Pit 2007 Field Work

Soil Horizon Data Only, NO /Lab Analysis

Permit Boundary (Portal Block)

N

0 300 ft

SCALE: 1:3,600 or 1" = 300'

Contour Interval 20 ft

This map is in the Kinney Coordinate System (KCS). It was projected from State Plane NAD83 to a vertical datum of 8,000 ft. using a Combined Factor (CF) of 1.0047927. To project back, add 7,000,000 to Northing and 1,700,000 to Easting, then multiply by the CF.

Carbon Resources LLC

KINNEY NO. 2 MINE

FIGURE 1

Planned Disturbed Area Soil Map

DRAWN BY: BC & GLH DATE: 9/20/-7

APPROVED BY: Gregory Hunt DATE: 12/31/2007

HANSEN ALLEN & LUCE INC ENGINEERS

23 S. Carbon Ave., Suite 21
Price, UT 84501

FILE: Fig 1 Soil Chemistry 07

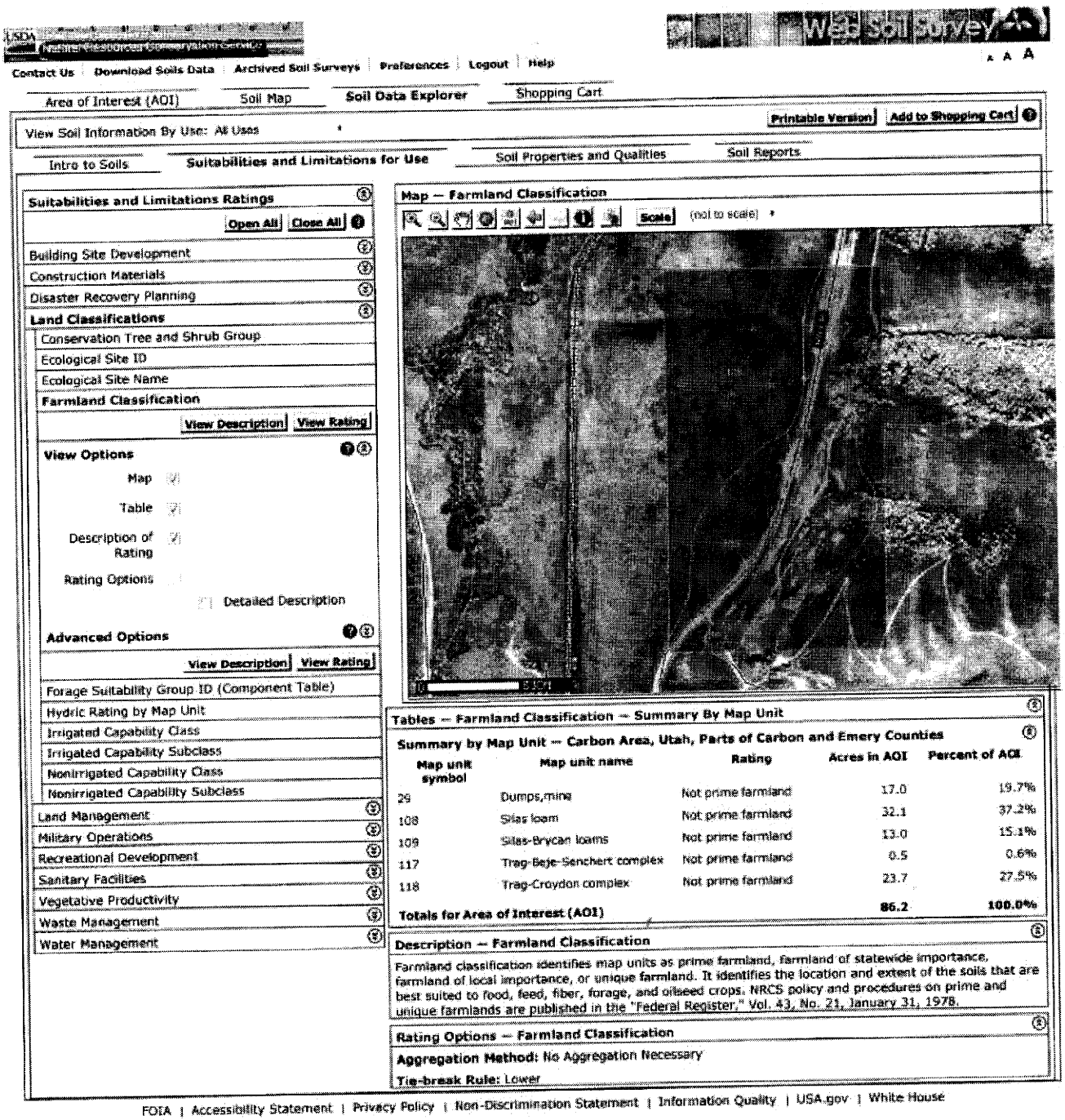

Web Soil Survey
Contact Us | Download Soils Data | Archived Soil Surveys | Preferences | Logout | Help
Area of Interest (AOI) | Soil Map | Soil Data Explorer | Shopping Cart
Printable Version | Add to Shopping Cart
View Soil Information By Use: All Uses
Intro to Soils | Suitabilities and Limitations for Use | Soil Properties and Qualities | Soil Reports
Suitabilities and Limitations Ratings
Open All | Close All
Building Site Development
Construction Materials
Disaster Recovery Planning
Land Classifications
Conservation Tree and Shrub Group
Ecological Site ID
Ecological Site Name
Farmland Classification
View Description | View Rating
View Options
Map
Table
Description of Rating
Rating Options
Detailed Description
Advanced Options
View Description | View Rating
Forage Suitability Group ID (Component Table)
Hydric Rating by Map Unit
Irrigated Capability Class
Irrigated Capability Subclass
Nonirrigated Capability Class
Nonirrigated Capability Subclass
Land Management
Military Operations
Recreational Development
Sanitary Facilities
Vegetative Productivity
Waste Management
Water Management
Map — Farmland Classification
Scale
(not to scale)
Tables — Farmland Classification — Summary By Map Unit
Summary by Map Unit — Carbon Area, Utah, Parts of Carbon and Emery Counties
Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI
29 | Dumps,mine | Not prime farmland | 17.0 | 19.7%
108 | Silas loam | Not prime farmland | 32.1 | 37.2%
109 | Silas-Brycan loams | Not prime farmland | 13.0 | 15.1%
117 | Trag-Beje-Senchert complex | Not prime farmland | 0.5 | 0.6%
118 | Trag-Croydon complex | Not prime farmland | 23.7 | 27.5%
Totals for Area of Interest (AOI) | | | 86.2 | 100.0%
Description — Farmland Classification
Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.
Rating Options — Farmland Classification
Aggregation Method: No Aggregation Necessary
Tie-break Rule: Lower
FOIA | Accessibility Statement | Privacy Policy | Non-Discrimination Statement | Information Quality | USA.gov | White House

TABLE 1

Kinney #2 Mine - Soil Analyses and Analytical Methods

ANALYSES	METHOD
Boron, soluble (Hot Water)	M6010B ICP
Calcium, soluble (Sat. Paste)	M6010B ICP
Magnesium, soluble (Sat. Paste	M6010B ICP
Potassium, extractable (AB-DTP	M6010B ICP
Potassium, soluble (Sat. Paste	M6010B ICP
Selenium, soluble (Hot Water)	SM3500-Se.C
Sodium Absorption Ratio	Calculation
Sodium, soluble (Sat. Paste)	M6010B ICP
Acid Generation Potential (cal	M600/2-78-054 1.3
Acid Neutralization Potential	M600/2-78-054 1.3
Acid-Base Potential (calc on S	M600/2-78-054 1.3
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Co
Clay	ASTM D 422 Hydromete
Conductivity @25C	M120.1 - Meter, w/ S
Neutralization Potential as Ca	M600/2-78-054 3.2.3
pH, Saturated Paste	USDA No. 60 (21A)
Sand	ASTM D 422 Hydromete
Saturation Percent	USDA No. 60 (2)
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2
Silt	ASTM D 422 Hydromete
Solids, Percent	CLPSOW390, PART F, D
Sulfur Organic Residual	M600/2-78-054 3.2.4
Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4
Sulfur Sulfate	M600/2-78-054 3.2.4
Sulfur Total	M600/2-78-054 3.2.4
Texture Classification	ASTM D 422 Hydromete
Total Sulfur minus Sulfate	M600/2-78-054 3.2.4
Nitrate as N, extractable (KCL	Calculation: NO3NO2
Nitrate/Nitrite as N, extracta	M353.2 - Automated C
Nitrite as N, extractable (KCL	M353.2 - Automated C
Nitrogen, total Kjeldahl	M351.2 - TKN by Bloc
Phosphorus, extractable (AB-DT	M365.1 - Automated A

Table 2

Utah Oil Gas and Mining Soil Suitability/Unsuitability Evaluation Guidelines [1]

Criteria	Suitability Rating[2]			
	Good (G)	Fair (F)	Poor (P)	Unacceptable(U)
Saturation %	25 to 55	≥56 to 80	<25, >80	
pH	6.5 to 8.1	6.0 to 6.4, 8.2-8.5	5.5 to 6.0, 8.6 to 9.0	<5.5, >9.0
EC (mS/cm 25^0 C)	0 to 4	4 to 8	8 to 15	>15
SAR (Sodium Adsorption Ration)[a,b]	0 to 4	5 to 10	10 to 14	>14[a]
%$CaCO_3$	<15	15-30	>30	
Texture [c]	sl, l, sil, scl, sc, ls, lfs	cl, c, sicl, sc, ls, lfs	sic, s, sc, cos, fs, vfs	g, vcos
Total Organic Carbon	<10%			≥10%
Available Water Capacity [d]	>0.10, moderate	0.05 to 0.10, low	<0.05, very low	
K factor [e]	<0.37	0.37	>0.37	

[1] Utah Oil Gas and Mining, October, 2005. Guideline for Management of Topsoil and Overburden R645-301-200 Soils - Table 4

[a] For clay textured soils unacceptable SAR > 14. For sandy textured soils unacceptable is >20.

[b] For most Western soils, the SAR to ESP relationship is usually 1:1, up to ESP ≈ 20. If SAR> 20, then determine ESP (Evangelou, 2000).

[c] s=sand, l=loam, si=silt, c=clay, v=very, f=fine, co=coarse, g=gravel

[d] Available Water Capacity is adjusted for texture and coarse fragment percentage, and SAR

[e] K factor recommendations from the USDA Soil Conservation Service, 1978. National Soils Handbook Notice 24 (3/31/78). NSH Part II-403.6 (a). For prime farmland soils, the K factor times the percent slope should be a value of five or less for minimal erosion hazard.

Table 3
Kinney #2 Mine Order 2 Soil Survey - Soil Map Unit Descriptions and Physical Parameters

Map Unit ID #	Map Unit	Map Unit Component	% of Map Unit[1]	Landform	Depth to Bedrock inches	Parent Material	Drainage[2]	Bulk Density g/cm^3	AWHC[3] in/in	Perm Class[4]	Hydro Soil Group[4]	Surface Runoff Class[5]	Root Restriction Depth[8]	Soil Depth Class[8]
DA	Disturbed Lands, 0-20 percent slopes	Disturbed Soil	90%	toeslopes	40-60 plus	Coal Waste and reclaimed Topsoil	W	1.4	.02-.12	3	B	M	None	60 plus
		Lo-sk Typic Haploxeroll	10%					N/A	N/A	N/A	N/A	N/A	N/A	N/A
DB	Disturbed Lands, 20-50 percent slopes	Disturbed Soils	80%	lower sideslopes	60 plus	Coal Waste and reclaimed Topsoil	MW- W	1.4	.01-.13	3	B	M	None	60 plus
		Lo-sk Typic Haploxeroll	10%					N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Fi-lo Typic Argixeroll	10%					N/A	N/A	N/A	N/A	N/A	N/A	N/A
1B	Coarse-loamy Typic Argicryoll Consociation, 35-70 percent slopes	Co-lo Typic Haplocryoll	80%	sideslopes	60 plus	Mixed Colluvium from Black Hawk Fm.	EW-W	1.50	.06-.12	2	A	H	None	40-60
		Disturbed Soils	10%		40-60			1.4	.02-.12	3	B	H	None	60 plus
		Lo-sk Typic Argicryoll	10%		40-60			1.35	.03-.16	3	B	H	None	40-60
2A	Typic Argixeroll - Typic Haploxeroll Complex, 0-35 percent slopes	Lo-sk Typic Argixeroll	50%	toeslopes	40-60	Mixed Colluvium from Black Hawk Fm	MW-W	1.40	.03-.15	3	B	M	None	40-60
		Lo-sk Typic Haploxeroll	35%					1.40	.05-.11	3	B	M	None	40-60
		Inclusions	15%		40-60			1.4	.11-.15	3	B	M	None	40-60
2B	Typic Argixeroll Consociation, 35-70 percent slopes	Lo-sk Typic Argixeroll	80%	sideslopes	40-60	Mixed Colluvium from Black Hawk Fm	MW-W	1.35	.08-.14	3.00	B	H	None	40-60
		Disturbed Soils	10%		40-60			N/A	N/A	N/A	N/A	N/A	N/A	N/A
		shallow to bedrock inclusion	10%		10 to 20									

[1] Percentage of components in map unit.

[2] Drainage: E=excessively drained ; W=well drained; MW=moderately well drained; P=poorly drained

[3] AWHC estimated with coarse fragment Reduction (UDOGM Guidelines, page 11)

[4] See explanation Table 7 , footnote 2

[5] Surface Runoff Class: L=low; M=moderate; H=high; VH=very high

[7] Soil Erosion Hazard: K<0.37 = Low (L); K = 0.37 = Moderate (M); K > 0.37 = High (H)

[8] VS= very shallow (0-10 inches); S=shallow (10-20 inches); MD=moderately deep (20-40 inches); D=deep (40-60 inches); VD=very deep (>60 inches)

Table 4

Kinney #2 Mine Order 2 Soil Survey - Soil Family Classification by Pedon Location

Pedon ID Number	Map Unit	Soil Classification
D-1	Disturbed Area Soils, 0-20 percent slopes	N/A Disturbed Land Soils
D-2	Disturbed Area Soils, 0-20 percent slopes	N/A Disturbed Land Soils
D-9A	Disturbed Area Soils, 0-20% percent slopes	N/A Disturbed Land Soils
D-9B	Disturbed Area Soils, 0-20 % percent slopes	N/A Disturbed Land Soils
D-10	Disturbed Area Soils, 0-20 % percent slopes	N/A Disturbed Land Soils
D-11	Disturbed Area Soils, 0-20% percent slopes	N/A Disturbed Land Soils
05-SP-07	Disturbed Area Soils, 0-20 percent slopes	N/A Disturbed Land Soils
06-SP-07	Disturbed Area Soils, 0-20 percent slopes	N/A Disturbed Land Soils
13-SP-07	Disturbed Area Soils, 0-20 percent slopes	N/A Disturbed Land Soils
D-3	Disturbed Area Soils, 20-50 percent slopes	N/A Disturbed Land Soils
D-4	Disturbed Area Soils, 20-50 percent slopes	N/A Disturbed Land Soils
D-5	Disturbed Area Soils, 20-50 percent slopes	N/A Disturbed Land Soils
D-6	Disturbed Area Soils, 20-50 percent slopes	N/A Disturbed Land Soils
D-7	Disturbed Area Soils, 20-50 percent slopes	N/A Disturbed Land Soils
D-12	1A Complex, 0-35 percent slopes	Loamy-skeletal, mixed, superactive, Typic Argicryoll
1A-1	1A Complex, 0-35 percent slopes	Loamy-skeletal, mixed, superactive, Typic Argicryoll
1B-1	1A Complex, 0 -35 percent slopes	Coarse-loamy, mixed, superactive, Typic Haplocryoll
1A-2	1A Complex, 0-35 percent slopes	Fine-loamy, mixed, superactive, Pachic Haplocryoll
10-SP-07	1A Complex, 0-35 percent slopes	Loamy-skeletal, mixed, superactive, Typic Argicryoll
D-8	1B Consociation, 35-70 % slopes	Coarse-loamy, mixed, superactive, Typic Haplocryoll
2A-1	2A Complex, 0-35 percent slopes	Loamy-skeletal, mixed, superactive, Typic Argixeroll
2A-2	2A Complex, 0-35 percent slopes	Loamy-skeletal, mixed, superactive, Typic Argixeroll
2A-3	2A Complex, 0-35 percent slopes	Loamy-skeletal, mixed, superactive, Typic Argixeroll
2A-5	2A Complex, 0-35 percent slopes	Loamy-skeletal, mixed, superactive, Typic Argixeroll
2A-6	2A Complex, 0-35 percent slopes	Fine-loamy, Mixed, superactive, Pachic Palexeroll
2A-7	2A Complex, 0-35 percent slopes	Loamy-skeletal, mixed, superactive, Typic Haploxeroll
04-SP-07	2A Complex, 0-35 percent slopes	Loamy-skeletal,mixed, superactive, Typic Haplustoll
07-SP-07	2A Complex, 0-35 percent slopes	Loamy-sleletal, mixed superactive, Typic Haplustoll
08-SP-07	2A Complex, 0-35 percent slopes	Fine-loamy, mixed, superactive, Typic Argixeroll
11-SP-07	2A Complex, 0-35 percent slopes	Loamy-skeletal, mixed, superactive, Typic Argixeroll
09-SP-07	2A Complex, 0-35 percent slopes	Fine-loamy, mixed, superactive, Typic Argixeroll
12-SP-07	2A Complex, 0-35 percent slopes	Coarse-loamy, mixed, superactive, Typic Haplustoll
2B-1	2B Consociation, 35-70 percent slopes	Loamy-skeletal, mixed, superactive, Typic Argixeroll
01-SP-07	3A Consociation, 0-3 percent slopes	Coarse-loamy, mixed, superactive, Cumulic Endoaquoll
02-SP-07	3A Consociation, 0-3 percent slopes	Fine-loamy, mixed, superactive, Cumulic Haplocryoll
03-SP-07	3A Consociation, 0-3 percent slopes	Fine-loamy, mixed, superactive, Cumulic Haplocryol

Table 5

Kinney #2 Mine Order 2 Soil Survey - Surface Disturbance by Soil Map Unit

Map Unit ID	Map Unit Name	Disturbance Acres
DA	Disturbed Lands, 0-20 percent slopes	14.1
DB	Disturbed Lands, 20-50 percent slopes	6.1
1B	Typic Argicryoll Consociation, 35-70 percent slopes	0.8
2A	Typic Argixeroll - Typic Haploxeroll Complex, 0-35 percent slopes	4.5
2B	Typic Argixeroll Consociation, 35-70 percent slopes	1.6
3A	Cumulic Haplocryoll, fine-loamy, 0-3 percent slopes	0.1
	Total	**27.3**

Table 6

Kinney #2 Order 2 Soil Survey - Soil Suitability Data

Lab	Sample	pH (Sat Paste)	R[1]	E.C. @25°C	R[1]	SAR	R[1]	Sand	Silt	Clay	VFS	USDA Texture Class[2]	R[1]	Saturation Percent	R[1]	Available Water Capacity[5]	R[1]	Organic Matter	Organic Carbon (calculated)	R[1]	Erodibility Factor (K-Factor)[4]	R[1]
ID	ID	units		dS/m		unitless		%	%	%	%			%		in/in		%	%		unitless	
L59731-01	D-1 0-6"	6.8	1	0.25	1	0.23	1	72.5	11.3	16.3	8.5	sl	1	34.6	1	0.04	3	2.4	1.4	1	0.1	1
L59731-02	D-1 6-16	6.4	2	0.22	1	0.11	1	70	15	15	12.2	sl	1	53.4	1	0.08	2	4	23.3	4	0.05	1
L59731-03	D-1 8-25"	6.7	1	0.18	1	0.08	1	78.3	7.5	16.3	8.1	sl	1	35.8	1	0.09	2	1.2	0.7	1	0.1	1
L59731-04	D-1 25-40"	7	1	0.16	1	0.11	1	73.8	12.5	13.8	11.4	sl	1	34.6	1	0.09	2	1.5	0.9	1	0.1	1
L59731-05	D-1 40-65"	6.5	1	0.21	1	0.11	1	80	7.5	12.5	8.5	sl	1	30.2	1	0.06	3	1	0.6	1	0.1	1
L59731-06	D-1 65-90"	7.2	1	0.26	1	0.15	1	83.8	3.8	12.5	31.8	sl	1	31.1	1	0.07	3	0.9	0.5	1	0.05	1
L59731-07	D-2 0-6"	7.3	1	0.18	1	0.08	1	77.5	7.5	15	8.8	sl	1	33.8	1	0.12	1	1.9	1.1	1	0.02	1
L59731-08	D-2 6-24"	7.5	1	0.5	1	0.05	1	78.8	7.5	13.8	1.9	sl	1	33.3	1	0.11	1	0.5	0.3	1	0.02	1
L59731-09	D-3 0-10"	7.6	1	0.27	1	0.08	1	72.5	8.8	18.8	7.6	sl	1	40.7	1	0.08	2	4	2.3	1	0.15	1
L59731-10	D-3 10-20"	7.4	1	0.27	1	0.09	1	71.3	11.3	17.5	7.4	sl	1	35.3	1	0.07	2	2.9	1.7	1	0.1	1
L59731-11	D-3 20-40"	6.9	1	0.17	1	0.09	1	72.5	8.8	18.8	8.8	sl	1	37	1	0.07	2	2.7	1.6	1	0.1	1
L59731-12	D-3 40-60 "	6.3	2	0.25	1	0.08	1	72.5	10	17.5	6.9	sl	1	38.9	1	0.05	2	3.1	1.8	1	0.05	1
L59731-13	D-3 60-75"	6.3	2	0.16	1	0.05	1	72.5	10	17.5	7.4	sl	1	37.8	1	0.04	3	3.2	1.9	1	0.05	1
L59731-14	D-3 coal	6.6	1	0.16	1		1	71.3	13.8	15	1.9	sl	1	59.2	2	0.11	1	5.2	30.1	4	0.05	1
L59731-15	D-4 0-8"	6.6	1	0.2	1	0.07	1	71.3	11.3	17.5	9.1	sl	1	40.2	1	0.07	2	2.4	1.4	1	0.15	1
L59731-16	D-4 8-16"	6.7	1	0.14	1	0.05	1	68.8	12.5	18.8	9.2	sl	1	39.2	1	0.07	2	5.5	1.3	1	0.15	1
L59731-17	D-4 19-72 coal	7.5	1	0.2	1		1	77.5	6.3	16.3	2.4	sl	1	61.6	2	0.08	2	2.2	3.2	1	0.15	1
L59731-18	D-5 0-6	7.7	1	0.26	1	0.07	1	65	13.8	21.3	6.2	scl	2	45.9	1	0.07	2	2.6	1.5	1	0.05	1
L59731-19	D-5 6-20"	7.8	1	0.18	1	0.07	1	65	13.8	21.3	6.6	scl	2	47	1	0.02	3	2.4	1.4	1	0.02	1
L59731-20	D-5 20-40"	7	1	0.12	1	0.08	1	63.8	15	21.3	5.8	scl	2	52.2	1	0.02	3	1.7	1	1	0.05	1
L59732-01	D-5 40-60"	6.9	1	0.26	1	0.33	1	37.5	41.3	21.3	13.1	sil	1	52.3	1	0.02	3	2.7	1.6	1	0.28	1
L59732-02	D-6 0-7"	6.9	1	0.28	1	0.11	1	30	47.5	22.5	12.3	sil	1	52.1	1	0.11	1	2.7	1.6	1	0.2	1
L59732-03	D-6 24-48	7	1	0.45	1	0.21	1	40	40	20	11.3	sil	1	54.4	1	0.03	3	2.2	1.3	1	0.17	1
L59732-04	D-6 48-72	6.7	1	0.45	1	0.2	1	37.5	42.5	20	8.9	sil	1	51	1	0.13	1	2.4	1.4	1	0.28	1
L59732-05	D-7 0-6"	6.7	1	0.69	1	0.09	1	30	50	20	9.7	sil	1	48.6	1	0.01	3	2.7	1.3	1	0.2	1
L59732-06	D-7 6-20"	7.2	1	0.46	1	0.12	1	30	47.5	22.5	7.1	sil	1	47.3	1	0.01	3	1.9	1.1	1	0.24	1
L59732-07	D-7 20-42"	6.8	1	0.2	1	0.12	1	32.5	46.3	21.3	8.5	sil	1	43.3	1	0.02	3	1.5	0.9	1	0.17	1
L59732-08	D-7 42-58"	6.8	1	0.3	1	0.22	1	32.5	45	22.5	9.1	sicl	2	54.3	1	0.06	2	2.1	1.2	1	0.1	1
L59732-09	D-7 58-70	7	1	0.48	1	0.13	1	52.5	35	12.5	23.6	loam	1	36.6	1	0.12	1	1.4	0.8	1	0.17	1
L59732-10	D-8 0-6"	7	1	0.59	1	0.08	1	52.5	38.8	8.8	20.3	loam	1	64.6	2	0.14	1	4.3	2.5	1	0.32	1
L59732-11	D-8 6-13	7	1	0.29	1	0.14	1	55	35	10	21.1	loam	1	41.5	1	0.14	1	1.9	1.1	1	0.2	1
L59732-12	D-8 13-20	7	1	0.16	1	0.17	1	55	32.5	12.5	24.2	loam	1	38.8	1	0.09	2	0.7	0.4	1	0.15	1
L59732-13	D-8 20-48	7.2	1	0.16	1	0.17	1	53.8	30	16.3	23.9	loam	1	38	1	0.08	2	0.5	0.3	1	0.1	1
L59732-14	D-9A 0-6"	7	1	0.45	1	0.09	1	47.5	36.3	16.3	14.4	loam	1	51.6	1	0.1	2	3.4	2	1	0.2	1
L59732-15	D-9A 6-12	7.9	1	0.47	1	0.08	1	50	32.5	17.5	15.4	loam	1	47.8	1	0.09	2	3.8	2.2	1	0.1	1
L59732-16	D-9A 12-30	7.9	1	0.27	1	0.1	1	68.8	18.8	12.5	5.6	sl	1	37.5	1	0.12	1	51	29.6	4	0.15	1
L59732-17	D9A 30-80	7	1	2.11	1	0.03	1	57.5	25	17.5	2.6	sl	1	55.2	2	0.17	1	35	24.4	4	0.24	1
L59732-18	D-9A 80-95	6.7	1	0.35	1	0.07	1	53.8	31.3	15	13.9	loam	1	49	1	0.14	1	7.4	4.3	1	0.24	1
L59732-20	D-9A 95-115"	6.8	1	0.25	1	0.24	1	55	30	15	15.5	loam	1	51	1	0.13	1	4.1	2.4	1	0.24	1
L59733-01	D9A 115-145	6.8	1	1.25	1	0.1	1	50	27.5	22.5	18.9	loam	1	42.5	1	0.13	1	0.5	0.3	1	0.17	1
L59733-02	D-9B 0-6	6.7	1	0.43	1	0.18	1	35	40	25	15	sil	1	41.5	1	0.12	1	2.9	1.7	1	0.32	1
L59732-03	D-9B 6-12	7.1	1	0.37	1	0.17	1	51.3	31.3	17.5	19.4	loam	1	34.9	1	0.11	1	4.1	2.4	1	0.17	1
L59733-04	D-9B 12-30	7.6	1	1.61	1	0.07	1	50	26.3	23.8	3.7	loam	1	50.3	1	0.17	1	40	23.1	4	0.17	1
L59733-05	D-9B 30-52"	6.7	1	1.77	1	0.04	1	93.8	3.8	2.5	2.9	sand	3	59	2	0.06	2	93	54	4	0.1	1
L59733-06	D-9B 52-80	7.9	1	1.85	1	0.05	1	60	26.3	13.8	21.5	loam	1	38	1	0.12	1	2.4	1.4	1	0.2	1
L59733-07	D-9B 80-102	7.5	1	1.73	1	0.06	1	53.8	31.3	15	20.3	loam	1	37.9	1	0.11	1	1.5	0.9	1	0.17	1
L59733-08	D-10 0-5"	7.3	1	0.53	1	0.16	1	47.5	37.5	15	31.8	loam	1	50.7	1	0.15	1	5.7	3.3	1	0.32	1
L59733-09	D-10 5-11	7.3	1	0.28	1	0.4	1	33.8	41.3	25	8.9	sil	1	48.3	1	0.18	1	5.3	3.1	1	0.43	4
L59733-10	D-10 11-23	7.1	1	0.22	1	0.49	1	26.3	35	38.8	3	sicl	2	61.7	2	0.18	1	1.4	0.8	1	0.32	1
L59733-11	D-10 23-35	7.3	1	0.25	1	0.43	1	22.5	35	42.5	2	sic	3	69.6	2	0.17	1	1.2	0.7	1	0.28	1
L59733-12	D-11 0-12	7.3	1	0.42	1	0.2	1	42.5	32.5	25	11.7	loam	1	40.8	1	0.1	2	2.8	1.6	1	0.2	1
L59733-13	D-11 12-48	7.4	1	1.63	1	0.06	1	62.5	20	17.5	6.9	sl	1	53.2	1	0.12	1	43	25	4	0.1	1
L59733-14	D-11 62-82	7.3	1	1.33	1	0.08	1	51.3	30	18.8	8.3	loam	1	44.8	1	0.02	3	6.2	3.6	1	0.05	1
L59733-15	D-12 0-6"	7.3	1	0.42	1	0.18	1	50	37.5	12.5	23.4	loam	1	55.9	2	0.16	1	5.5	3.2	1	0.32	1
L59733-16	D-12 6-14	7.6	1	0.27	1	0.3	1	52.5	33.8	13.8	22.7	loam	1	42.7	1	0.15	1	1.7	1	1	0.24	1
L59733-17	D-12 14-28	7.1	1	0.21	1	0.35	1	51.3	36.3	12.5	18.8	loam	1	36.5	1	0.12	1	1.2	0.7	1	0.17	1
L59733-18	D-12 28-48	7.6	1	0.25	1	0.32	1	53.8	27.5	18.8	17.2	loam	1	36.4	1	0.03	3	0.7	0.4	1	0.1	1
L59733-19	D-12 48-66	6.8	1	0.3	1	0.27	1	56.3	25	18.8	23.6	loam	1	38	1	0.03	3	0.3	0.2	1	0.05	1
L59733-20	2A-1 0-10"	7	1	0.31	1	0.19	1	57.5	30	12.5	24.3	loam	1	46.8	1	0.15	1	2	1.2	1	0.32	1
L59734-01	2A-1 10-24	7.1	1	0.29	1	0.37	1	50	30	20	15.5	loam	1	34.6	1	0.09	2	0.7	0.4	1	0.17	1
L59734-02	2A-1 24-44	7.7	1	0.18	1	0.2	1	35	37.5	27.5	14.1	cl	2	44.3	1	0.08	2	0.7	0.4	1	0.17	1
L59734-03	2A-1 44-65	6.8	1	0.24	1	0.39	1	42.5	31.3	26.3	12.2	loam	1	40.6	1	0.04	3	0.3	0.2	1	0.1	1
L59734-04	2A-1 65-80	7.3	1	0.24	1	0.41	1	55	25	20	13.5	loam	1	34.3	1	0.03	3	0.3	0.2	1	0.05	1
L59734-05	2A-2 0-5"	7.3	1	0.31	1	0.33	1	47.5	36.3	16.3	19.6	loam	1	44.3	1	0.14	1	1.4	0.8	1	0.32	1
L59734-06	2A-2 5-14	7.3	1	0.32	1	0.33	1	48.8	36.3	15	21.9	loam	1	45.2	1	0.15	1	2.4	1.4	1	0.24	1
L59734-07	2A-2 14-25	7.6	1	0.16	1	0.43	1	35	46.3	18.8	13.1	sil	1	32.3	1	0.11	1	0.9	0.5	1	0.24	1
L59734-08	2A-2 25-38	7.5	1	0.12	1	0.37	1	37.5	36.3	26.3	15.5	sil	1	37.8	1	0.09	2	0.3	0.2	1	0.24	1
L59734-09	2A-3 0-9"	7.6	1	0.2	1	0.23	1	56.3	32.5	11.3	27.1	loam	1	45.5	1	0.13	1	2.9	1.7	1	0.32	1
L59734-10	2A-3 9-19	7.8	1	0.14	1	0.33	1	45	33.8	21.3	9	loam	1	33.6	1	0.1	2	1.2	0.7	1	0.17	1
L59734-11	2A-3 19-36	7.4	1	0.14	1	0.41	1	47.5	30	22.5	18	loam	1	32	1	0.07	2	0.9	0.5	1	0.15	1
L59734-12	2A-3 36-52	7.6	1	0.19	1	0.33	1	31.3	40	28.8	19.4	sil	1	42.8	1	0.04	3	0.9	0.5	1	0.15	1
L59734-13	2A-5 0-6"	7.3	1	0.36	1	0.38	1	46.3	37.5	16.3	19.3	loam	1	44.7	1	0.08	2	3.1	1.8	1	0.2	1
L59734-14	2A-5 6-12	7.8	1	0.36	1	0.33	1	46.3	32.5	21.3	12.6	loam	1	39.6	1	0.05	2	2.4	1.4	1	0.1	1
L59734-15	2A-5 12-24	7.8	1	0.11	1	0.38	1	28.8	40	31.3	7.2	sicl	2	39.2	1	0.09	2	0.9	0.5	1	0.17	1
L59734-16	2A-5 24-48	7.8	1	0.09	1	0.42	1	22.5	37.5	40	4.8	sicl/sic	3	47.3	1	0.08	2	0.7	0.4	1	0.16	1
L59734-17	2A-6 0-6"	7.7	1	0.23	1	0.16	1	47.5	37.5	15	18	loam	1	40.9	1	0.17	1	0.6	1.2	1	0.32	1
L59734-18	2A-6 6-12	7.8	1	0.19	1	0.21	1	50	33.8	16.3	24.3	loam	1	38.8	1	0.24	1	2.4	1.3	1	0.24	1
L59734-19	2A-6 12-24	7.5	1	0.18	1	0.43	1	45	38.8	16.3	15.5	loam	1	39.2	1	0.15	1	1.7	1	1	0.24	1
L59734-20	2A-6 24-40	7.5	1	0.22	1	0.42	1	45	38.8	16.3	14.9	loam	1	42.8	1	0.15	1	1.7	1	1	0.24	1
L59735-01	2A-6 40-60	7.4	1	0.51	1	1.39	1	50	25	25	13.6	loam	1	31.6	1	0.14	1	0.9	0.5	1	0.24	1
L59735-02	2A-6 60-80	7.2	1	0.35	1	1.09	1	47.5	27.5	25	19.2	loam	1	32.9	1	0.11	1	0.7	0.4	1	0.17	1
L59735-03	2A-7 0-7"	7.8	1	0.35	1	0.55	1	55	25	20	20.4	loam	1	47.8	1	0.11	1	2	1.2	1	0.2	1
L59735-04	2A-7 7-20	7.6	1	0.4	1	0.43	1	51.3	26.3	22.5	21.2	loam	1	37.4	1	0.1	2	1	0.6	1	0.17	1
L59735-05	2A-7 20-38	7.2	1	0.28	1	0.43	1	50	26.3	23.8	22.6	loam	1	34.2	1	0.05	2	1	0.3	1	0.1	1
L59735-06	2B-1 0-9"	7.5	1	0.3	1	0.16	1	58.8	21.3	20	9.6	l	1	49.7	1	0.15	1	2.2	1.3	1	0.2	1
L59735-07	2B-1 9-19	7	1	0.15	1	0.37	1	31.3	35	33.8	8.5	sicl	2	41	1	0.15	1	0.9	0.5	1	0.17	1
L59735-08	2B-1 19-33	7	1	0.29	1	0.44	1	16.3	40	43.8	15.7	sic	2	51.8	1	0.11	1	0.9	0.5	1	0.1	1
L59735-09	2B-1 33-51	7.3	1	0.42	1	0.24	1	30	36.3	33.8	8.7	sicl	2	43.4	1	0.02	3	0.5	0.3	1	0.1	1
L59735-10	1A-1 0-6"	7.1	1	0.54	1	0.07	1	36.3	43.8	20	20.8	sil	1	59.2	2	0.16	1	4.5	2.6	1	0.43	4
L59735-11	1A-1 6-17	7.5	1	0.25	1	0.11	1	36.3	45	18.8	18.2	sil	1	45.8	1	0.13	1	1	0.6	1	0.24	1
L59735-12	1A-1 17-28	7.1	1	0.18	1	0.15	1	40	37.5	22.5	20.7	l	1	39.5	1	0.09	2	0.7	0.4	1	0.17	1
L59725-13	1A-1 28-60	7.5	1	0.22	1	0.51	1	36.3	35	28.8	19.1	cl	2	40.9	1	0.06	2	0.3	0.2	1	0.1	1
L59735-14	1A-1 60-100	7.1	1	0.27	1	0.76	1	43.8	30	26.3	18.5	l	1	42.2	1	0.05	2	0.3	0.2	1	0.1	1
L59735-15	1A-2 15-25	7.7	1	0.48	1	0.17	1	48.8	32.5	18.8	18.2	l	1	47.3	1	0.14	1	3.4	2	1	0.24	1
L59735-16	1A-2 25-40	7.5	1	0.52	1	0.14	1	45	38.8	16.3	18.1	l	1	47.7	1	0.15	1	2.4	1.3	1	0.24	1
L59735-17	1A-2 40-60	7.7	1	0.76	1	0.15	1	42.5	38.8	18.8	19.1	l	1	44.3	1	0.15	1	1.5	0.9	1	0.24	1
L59735-18	1A-2 60-75	7.4	1	0.45	1	0.15	1	46.3	35	18.8	18.1	l	1	40.8	1	0.12	1	1.7	1	1	0.17	1
L59735-19	1A-2 75-90	7.1	1	1.25	1	0.13	1	43.8	38.8	17.5	16.3	l	1	55.8	1	0.09	2	1.5	0.9	1	0.17	1
L59735-20	1B-1 0-7	7.1	1	0.58	1	0.11	1	41.3	42.5	16.3	16.4	vsil	1	64.4	2	0.15	1	5.3	3.1	1	0.43	4
L59736-01	1B-1 7-15	7	1	0.48	1	0.57	1	42.5	40	17.5	16.6	l	1	130	4	0.15	1	1.4	0.8	1	0.24	1
L59736-02	1B-1 15-28	7.4	1	0.33	1	1.25	1	42.5	45	12.5	17.6	sil	1	86.7	3	0.11	1	0.7	0.4	1	0.24	1
L59736-03	1B-1 28-60	7	1	0.29	1	0.89	1	57.5	30	12.5	18.3	l	1	29.9	1	0.02	3	0.2	0.1	1	0.05	1

Lab	$CaCO_3$	R[1]	Boron	R[1]	Se (Hot H_2O sol)	R[1]	Cumulative Rating	Most Limiting Suitability Rating[1]	Average Suitability Rating[1]	Calcium, soluble (Sat. Paste)	Magnesium, soluble (Sat. Paste)	Sodium, soluble (Sat. Paste)	Potassium, soluble (Sat. Paste)	Nitrogen-Nitrate	Phospohorus	boron	selenium	total sulfer	Acid-Base Potential
ID	%		mg/Kg		mg/Kg					meq/L	meq/L	meq/L	meq/L	mg/Kg	mg/Kg	meq/L	mg/kg	mg/kg	T Ca / 1KT overburden
L59731-01	2.3	1	*		*		11	3	1.22	1.57	0.12	0.22	0.32	1.1	28	*	*	*	*
L59731-02	1.2	1	*		*		14	4	1.55	1.28	0.15	0.1	0.07	1.1	36	*	*	*	*
L59731-03	3.4	1	*		*		10	2	1.11	0.82	0.14	0.06	0.1	1.6	14	*	*	*	*
L59731-04	0.2	1	*		*		10	2	1.11	0.76	0.15	0.08	0.08	0.9	29	*	*	*	*
L59731-05	0.2	1	*		*		11	3	1.22	1.04	0.22	0.09	0.08	U	20	*	*	*	*
L59731-06	0.5	1	*		*		11	3	1.22	1.36	0.24	0.14	0.05	U	20	*	*	*	*
L59731-07	0.6	1	*		*		9	1	1	0.8	0.16	0.06	0.11	0.2	15	*	*	*	*
L59731-08	0.4	1	*		*		9	1	1	0.16	0.13	0.02	0.08	U	13	*	*	*	*
L59731-09	1.4	1	0.67	1	U	1	11	2	1	1.2	0.21	0.07	0.33	1.5	29	0.67	U	0.02	15
L59731-10	1.5	1	0.66	1	U	1	11	2	1	1.52	0.24	0.09	0.18	0.9	20	0.66	U	0.02	10
L59731-11	1	1	0.65	1	U	1	11	2	1	0.68	0.14	0.06	0.07	0.4	16	0.65	U	0.02	18
L59731-12	1.8	1	0.48	1	U	1	12	2	1.09	1.13	0.26	0.07	0.06	0.2	17	0.48	U	0.03	14
L59731-13	1.8	1	1.11	1	U	1	13	3	1.18	13.4	5.67	0.17	0.16	0.4	15	1.11	U	0.13	19
L59731-14	3.3	1	2.3	1	U	1	13	4	1.18	15.3	3.06	0.07	0.13	1	5	2.3	U	0.46	19
L59731-15	1.2	1	*		*		10	2	1.11	0.82	0.13	0.05	0.07	1.3	22	*	*	*	*
L59731-16	0.9	1	*		*		10	2	1.11	0.47	0.12	0.03	0.06	0.3	21	2.25	U	0.39	23
L59731-17	2.3	1	2.25	1	U	1	13	2	1.18	16.9	8.58	0.08	0.13	1.1	4	*	*	*	*
L59731-18	2.3	1	*		*		11	2	1.22	1.17	0.24	0.06	0.09	0.5	24	*	*	*	*
L59731-19	2.6	1	*		*		12	2	1.09	0.81	0.15	0.05	0.06	0.5	24	*	*	*	*
L59731-20	2.7	1	*		*		13	3	1.44	0.34	0.1	0.04	0.08	0.9	20	*	*	*	*
L59732-01	3.3	1	*		*		11	3	1.22	1.33	0.31	0.3	0.08	7.9	16	*	*	*	*
L59732-02	3.7	1	*		*		9	1	1	2.48	0.38	0.14	0.45	9	15	*	*	*	*
L59732-03	3.2	1	*		*		11	3	1.22	3.21	0.76	0.3	0.09	3.3	12	*	*	*	*
L59732-04	3.3	1	*		*		9	1	0.81	2.96	0.69	0.28	0.09	2.3	10	*	*	*	*
L59732-05	2.7	1	*		*		11	3	1.22	4.92	0.72	0.16	0.67	1.9	7	*	*	*	*
L59732-06	3.3	1	*		*		11	3	1.22	2.98	0.56	0.17	0.15	0.4	10	*	*	*	*
L59732-07	3.3	1	*		*		11	3	1.22	0.93	0.32	0.1	0.13	0.5	8	*	*	*	*
L59732-08	2.8	1	*		*		11	2	1.22	1.63	0.42	0.23	0.09	U	8	*	*	*	*
L59732-09	0.8	1	*		*		9	1	1	3.85	0.83	0.2	0.11	U	16	*	*	*	*
L59732-10	1.2	1	*		*		10	2	1.11	3.91	0.79	0.13	1.11	2.1	25	*	*	*	*
L59732-11	0.8	1	*		*		9	1	1	1.13	0.28	0.12	0.42	1.7	20	*	*	*	*
L59732-12	0.6	1	*		*		10	2	1.11	0.56	0.23	0.11	0.24	0.8	20	*	*	*	*
L59732-13	0.6	1	*		*		10	2	1.11	0.6	0.3	0.12	0.22	U	17	*	*	*	*
L59732-14	2	1	*		*		10	2	1.11	3.48	0.39	0.13	0.2	1	11	*	*	*	*
L59732-15	1.9	1	*		*		10	2	1.11	3.25	0.54	0.12	0.09	U	11	*	*	*	*
L59732-16	4.2	1	2.31	1	U	1	13	4	1.18	1.33	0.28	0.09	0.1	0.7	3	2.18	U	0.62	27
L59732-17	5.4	1	2.16	1	U	1	14	4	1.27	20.9	11	0.12	0.16	0.8	2	0.91	U	0.06	35
L59732-18	1.7	1	0.91	1	U	1	10	1	0.9	2.34	0.29	0.09	0.15	0.6	9	0.86	U	0.04	15
L59732-20	1.3	1	0.85	1	U	1	10	1	0.9	1.35	0.29	0.22	0.05	1.3	11	0.46	U	0.02	12
L59733-01	0.5	1	0.57	1	U	1	10	1	0.9	12.7	2.67	0.3	0.35	3.6	13	0.57	U	0.02	5
L59733-02	2.4	1	0.46	1	U	1	10	1	0.9	2.78	0.39	0.23	0.32	2.9	20	0.46	U	0.03	24
L59732-03	2.2	1	0.49	1	U	1	10	1	0.9	2.47	0.39	0.21	0.12	0.9	31	0.49	U	0.52	22
L59733-04	5.1	1	2.27	1	0.007	1	14	4	1.27	18.5	3.87	0.25	0.17	1.5	3	2.27	0.007	1.13	35
L59733-05	4.6	1	1.41	1	U	1	17	4	1.54	25.1	1.48	0.16	0.06	1.2	1	1.41	U	0.05	11
L59733-06	0.7	1	1.73	1	U	1	10	1	0.91	20.1	6.54	0.21	0.42	0.4	11	1.73	U	0.03	5
L59733-07	0.6	1	0.86	1	U	1	10	1	0.91	19.4	6.62	0.24	0.58	0.4	11	0.86	U	0.01	6
L59733-08	1	1	*		*		9	1	1	3.23	0.67	0.23	1.11	1.8	21	*	*	*	*
L59733-09	1.7	1	*		*		12	4	1.33	1.34	0.28	0.36	0.15	1.5	13	*	*	*	*
L59733-10	0.7	1	*		*		11	2	1.22	0.82	0.25	0.36	0.09	0.9	7	*	*	*	*
L59733-11	1	1	*		*		12	3	1.33	0.81	0.39	0.34	0.19	2	8	*	*	*	*
L59733-12	3.1	1	*		*		10	2	1.11	2.98	0.35	0.26	0.22	1.8	15	*	*	*	*
L59733-13	3.5	1	1.41	1	U		13	4	1.18	20.5	2.88	0.23	0.11	0.7	2	1.41	U	0.039	23
L59733-14	5.3	1	*		*		11	3	1.22	12.8	4.28	0.28	0.16	0.6	9	*	*	*	*
L59733-15	0.7	1	*		*		10	2	1.11	2.11	0.62	0.21	1.06	2.6	22	*	*	*	*
L59733-16	0.7	1	*		*		9	1	1	1.23	0.41	0.28	0.38	2	16	*	*	*	*
L59733-17	0.5	1	*		*		9	1	1	0.82	0.31	0.27	0.2	1.9	13	*	*	*	*
L59733-18	0.6	1	*		*		11	3	1.22	1.15	0.36	0.28	0.18	1.8	11	*	*	*	*
L59733-19	2.8	1	*		*		11	3	1.22	1.63	0.33	0.27	0.09	1.9	11	*	*	*	*
L59733-20	0.5	1	*		*		9	1	1	1.59	0.45	0.2	0.52	4.4	14	*	*	*	*
L59734-01	0.5	1	*		*		10	2	1.11	1.33	0.51	0.36	0.34	7.4	39	*	*	*	*
L59734-02	8.1	1	*		*		11	2	1.22	1.26	0.25	0.16	0.06	34	17	*	*	*	*
L59734-03	12.2	1	*		*		11	2	1.22	1.37	0.29	0.36	0.08	7.6	8	*	*	*	*
L59734-04	14.8	1	*		*		11	3	1.22	1.51	0.34	0.4	0.08	6.4	8	*	*	*	*
L59734-05	0.8	1	*		*		9	1	1	1.47	0.46	0.33	0.49	5.2	17	*	*	*	*
L59734-06	0.6	1	*		*		9	1	1	1.49	0.44	0.33	0.91	7	27	*	*	*	*
L59734-07	0.5	1	*		*		9	1	1	0.65	0.23	0.29	0.2	47	17	*	*	*	*
L59734-08	0.7	1	*		*		10	2	1.11	0.47	0.23	0.22	0.12	41.8	10	*	*	*	*
L59734-09	0.6	1	*		*		9	1	1	0.9	0.28	0.16	0.54	9.7	14	*	*	*	*
L59734-10	0.6	1	*		*		10	2	1.11	0.47	0.23	0.2	0.21	5.1	9	*	*	*	*
L59734-11	0.5	1	*		*		10	2	1.11	0.54	0.19	0.25	0.11	4.1	9	*	*	*	*
L59734-12	0.8	1	*		*		11	3	1.22	1.08	0.31	0.28	0.07	11.1	33	*	*	*	*
L59734-13	0.8	1	*		*		10	2	1.11	1.87	0.52	0.42	0.68	11.4	25	*	*	*	*
L59734-14	0.7	1	*		*		10	2	1.11	2.15	0.42	0.38	0.54	6.5	14	*	*	*	*
L59734-15	0.5	1	*		*		11	2	1.22	0.37	0.24	0.21	0.26	4.2	7	*	*	*	*
L59734-16	0.7	1	*		*		12	3	1.33	0.24	0.31	0.22	0.25	7	8	*	*	*	*
L59734-17	0.7	1	*		*		9	1	1	1.14	0.43	0.15	0.75	7.2	24	*	*	*	*
L59734-18	0.7	1	*		*		9	1	1	0.84	0.31	0.18	0.62	6.3	22	*	*	*	*
L59734-19	0.7	1	*		*		9	1	1	0.96	0.31	0.35	0.1	3.5	19	*	*	*	*
L59734-20	0.7	1	*		*		9	1	1	1.27	0.44	0.39	0.24	6.1	23	*	*	*	*
L59735-01	1.4	1	*		*		9	1	1	1.54	0.73	1.48	0.39	3.8	31	*	*	*	*
L59735-02	1	1	*		*		9	1	1	0.98	0.64	0.98	0.29	3.6	28	*	*	*	*
L59735-03	0.6	1	*		*		9	1	1	1.24	0.45	0.51	0.74	4.6	17	*	*	*	*
L59735-04	0.5	1	*		*		10	2	1.11	1.48	0.48	0.43	0.6	3.8	17	*	*	*	*
L59735-05	0.5	1	*		*		10	2	1.11	1.06	0.41	0.37	0.3	1.9	14	*	*	*	*
L59735-06	0.6	1	*		*		9	1	1	1.11	0.42	0.16	0.75	7.9	17	*	*	*	*
L59735-07	0.9	1	*		*		10	2	1.11	0.67	0.22	0.25	0.11	3.2	5	*	*	*	*
L59735-08	1	1	*		*		10	2	1.11	1.42	0.35	0.42	0.08	4.2	6	*	*	*	*
L59735-09	6.1	1	*		*		12	3	1.33	2.52	0.58	0.31	0.06	4.4	3	*	*	*	*
L59735-10	0.8	1	*		*		13	4	1.44	3.16	0.78	0.11	1.19	6.4	32	*	*	*	*
L59735-11	0.3	1	*		*		9	1	1	1.11	0.36	0.1	0.36	4.2	27	*	*	*	*
L59735-12	0.3	1	*		*		10	2	1.11	0.55	0.27	0.1	0.25	3.9	19	*	*	*	*
L59725-13	0.5	1	*		*		11	2	1.22	0.89	0.24	0.39	0.07	4.5	25	*	*	*	*
L59735-14	0.6	1	*		*		10	2	1.11	0.98	0.23	0.58	0.07	3.1	22	*	*	*	*
L59735-15	1	1	*		*		10	2	1.11	3.73	0.25	0.24	0.19	4.1	10	*	*	*	*
L59735-16	0.8	1	*		*		9	1	1	4.3	0.38	0.22	0.14	4.6	23	*	*	*	*
L59735-17	0.6	1	*		*		9	1	1	5.92	0.79	0.29	0.32	4	33	*	*	*	*
L59735-18	0.6	1	*		*		9	1	1	3.26	0.38	0.22	0.35	3.5	34	*	*	*	*
L59735-19	0.8	1	*		*		10	2	1.11	11.4	1.19	0.33	0.62	2.9	56	*	*	*	*
L59735-20	0.9	1	*		*		13	4	1.44	3.71	1.06	0.17	1.69	5	47	*	*	*	*
L59736-01	0.6	1	*		*		12	4	1.33	1.81	0.46	0.61	0.82	4.1	34	*	*	*	*
L59736-02	0.4	1	*		*		11	3	1.22	0.71	0.21	0.85	0.38	4.4	25	*	*	*	*
L59736-03	0.3	1	*		*		11	3	1.33	0.68	0.21	0.6	0.23	4.1	18	*	*	*	*

[1] R = Soil Suitability Rating (see Table 2)
Good = 1, Fair = 2, Poor = 3 Unsuitable = 4

[2] See explanation of abbreviation in footnotes on Table 2

[3] See pedon descriptions in Appendix 2

[4] See K-factor, assumptions, calculations and input parameters in Table 7

[5] Ley, et al. Field Evaluation and Comparison of Techniques for Measuring Soil Water, Table I

* Not analized/data not available

U - tested below ACZ Lab detection limits

Table 7

Kinney #2 Mine Order 2 Soil Survey - Erodibility Factor Calculations and Input Parameters

Lab ID	Sample ID	Sand	Silt	Clay	very fine sand	Organic Matter	Structure	Permeability	Fine Earth Fraction Soil Erodibility Factor	Whole Soil (includes coarse fragments) Erodibility Factor
		2.0 - 0.1 mm	0.1 - 0.002 mm	< 0.002 mm	%	(%)*	S[1]	P[2]	Kf[3]	Kw[3]
L59731-01	D-1 0-6"	73	11	34	8.5	2.4	1	2	0.24	0.05
L59731-02	D-1 6-16	70	15	15	12.2	4	2	2	0.2	0.05
L59731-03	D-1 6-25"	76	8	16	8.1	1.2	4	2	0.2	0.1
L59731-04	D-1 25-40"	85	13	14	11.4	1.5	4	2	0.2	0.1
L59731-05	D-1 40-65"	30	8	13	8.5	1	4	2	0.2	0.1
L59731-06	D-1 65-90"	31	4	13	31.8	0.9	4	2	0.15	0.05
L59731-07	D-2 0-6"	78	8	15	8.9	1.9	1	2	0.24	0.02
L59731-08	D-2 6-24"	79	8	14	1.9	0.5	2	2	0.2	0.02
L59731-09	D-3 0-10"	73	9	19	7.6	4	2	2	0.24	0.15
L59731-10	D-3 10-20"	71	11	18	7.4	2.9	4	2	0.2	0.1
L59731-11	D-3 20-40"	73	9	19	8.9	2.7	4	2	0.2	0.1
L59731-12	D-3 40-60 "	73	10	18	6.9	3.1	4	2	0.2	0.05
L59731-13	D-3 60-75"	73	10	18	7.4	3.2	4	2	0.2	0.05
L59731-14	D-3 coal	71	14	15	1.9	5.2	4	2	0.24	0.05
L59731-15	D-4 0-8 "	71	11	18	9.1	2.4	4	2	0.24	0.15
L59731-16	D-4 8-16"	69	13	19	9.2	5.5	4	2	0.24	0.15
L59731-17	D-4 19-72 coal	78	6	16	2.4	2.2	4	2	0.2	0.15
L59731-18	D-5 0-6	65	14	21	6.2	2.6	4	4	0.28	0.05
L59731-19	D-5 6-20"	65	14	21	6.9	2.4	4	4	0.24	0.02
L59731-20	D-5 20-40"	64	15	21	5.8	1.7	4	4	0.24	0.05
L59732-01	D-5 40-60"	38	41	21	13.1	2.7	4	4	0.28	0.28
L59732-02	D-6 0-7"	30	48	23	12.3	2.7	4	4	0.55	0.2
L59732-03	D-6 24-48	40	40	20	11.3	2.2	4	4	0.43	0.17
L59732-04	D-6 48-72	38	43	20	8.9	2.4	4	4	0.43	0.28
L59732-05	D-7 0-6"	30	50	20	9.7	2.7	4	3	0.55	0.2
L59732-06	D-7 6-20"	30	48	23	7.1	1.9	4	3	0.43	0.24
L59732-07	D-7 20-42"	33	46	21	8.5	1.5	4	3	0.43	0.17
L59732-08	D-7 42-58"	33	45	23	9.1	2.1	4	5	0.32	0.1
L59732-09	D-7 58-70	53	35	13	23.6	1.4	4	3	0.32	0.17
L59732-10	D-8 0-6"	53	39	9	20.3	4.3	2	3	0.37	0.32
L59732-11	D-8 6-13	55	35	10	21.1	1.9	2	3	0.32	0.2
L59732-12	D-8 13-20	55	33	13	24.2	0.7	4	3	0.32	0.15
L59732-13	D-8 20-48	54	30	16	23.9	0.5	4	3	0.32	0.1
L59732-14	D-9A 0-6"	48	36	16	14.4	3.4	4	3	0.37	0.2
L59732-15	D-9A 6-12	50	33	18	15.4	3.8	4	3	0.32	0.1
L59732-16	D-9A 12-30	69	19	13	5.6	51	4	2	0.2	0.15
L59732-17	D9A 30-68	58	25	18	2.6	35	4	3	0.32	0.24
L59732-18	D-9A 80-95	54	31	15	13.9	7.4	3	3	0.32	0.24
L59732-20	D-9A 95-115"	55	30	15	15.5	4.1	4	3	0.32	0.24
L59733-01	D9A 115-145	50	28	16	18.9	0.5	4	3	0.32	0.17
L59733-02	D-9B 0-6	35	40	25	15.0	2.9	4	3	0.55	0.32
L59732-03	D-9B 6-12	51	31	18	19.4	4.1	4	3	0.32	0.17
L59733-04	D-9B 12-30	50	26	24	3.7	40	4	1	0.1	0.17
L59733-05	D-9B 30-52"	94	4	3	2.9	93	4	2	0.15	0.1
L59733-06	D-9B 52-80	60	27	14	21.5	2.4	4	2	0.2	0.2
L59733-07	D-9B 80-102	54	31	15	20.3	1.5	4	3	0.32	0.17
L59733-08	D-10 0-5"	48	38	15	31.8	5.7	3	3	0.37	0.32
L59733-09	D-10 5-11	34	41	25	8.9	5.3	4	3	0.43	0.43
L59733-10	D-10 11-23	26	35	39	3.0	1.4	4	5	0.32	0.32
L59733-11	D-10 23-35	23	35	43	2.0	1.2	4	6	0.28	0.28
L59733-12	D-11 0-12	43	33	25	11.7	2.8	4	3	0.37	0.2
L59733-13	D-11 12-48	63	20	18	6.9	43	4	2	0.2	0.1
L59733-14	D-11 62-82	51	30	19	6.3	6.2	4	3	0.32	0.05
L59733-15	D-12 0-6"	50	36	13	23.4	5.5	2	3	0.37	0.32
L59733-16	D-12 6-14	53	34	14	22.7	1.7	2	3	0.32	0.24
L59733-17	D-12 14-28	51	36	13	18.8	1.2	4	3	0.32	0.17
L59733-18	D-12 28-48	54	28	19	17.2	0.7	4	3	0.32	0.1
L59733-19	D-12 48-66	56	25	19	23.6	0.3	4	3	0.32	0.05
L59733-20	2A-1 0-10"	58	30	13	24.3	2	2	3	0.37	0.32
L59734-01	2A-1 10-24	50	30	20	15.5	0.7	4	3	0.32	0.17
L59734-02	2A-1 24-44	35	38	28	14.1	0.7	4	4	0.32	0.17
L59734-03	2A-1 44-65	43	31	26	12.2	0.3	4	3	0.32	0.1
L59734-04	2A-1 65-80	55	25	20	13.5	0.3	4	3	0.32	0.05
L59734-05	2A-2 0-5"	48	36	16	19.6	1.4	2	3	0.37	0.32
L59734-06	2A-2 5-14	49	36	15	21.9	2.4	2	3	0.32	0.24
L59734-07	2A-2 14-25	35	46	19	13.1	0.9	4	3	0.43	0.24
L59734-08	2A-2 25-38	38	36	26	15.6	0.3	4	3	0.43	0.24
L59734-09	2A-3 0-9"	56	33	11	27.1	2.9	2	3	0.37	0.32

Table 7 **Kinney #2 Mine Order 2 Soil Survey - Erodibility Factor Calculations and Input Parameters**

L59734-10	**2A-3 9-19**	45	34	21	9.0	1.2	4	3	0.32	0.17
L59734-11	**2A-3 19-36**	48	30	23	18.0	0.9	4	3	0.32	0.15
L59734-12	**2A-3 36-52**	31	40	29	19.4	0.9	4	3	0.43	0.15
L59734-13	**2A-5 0-6"**	46	38	16	19.3	3.1	2	3	0.37	0.2
L59734-14	**2A-5 6-12**	46	33	21	12.6	2.4	4	3	0.32	0.1
L59734-15	**2A-5 12-24**	29	40	31	7.2 *	0.9	4	5	0.32	0.17
L59734-16	**2A-5 24-48**	23	38	40	4.8	0.7	4	6	0.28	0.18
L59734-17	**2A-6 0-6"**	48	39	15	18.0	0.6	2	3	0.37	0.32
L59734-18	**2A-6 6-12**	50	26	16	24.3	2.4	2	3	0.32	0.24
L59734-19	**2A-6 12-24**	45	39	16	15.5	1.7	4	3	0.32	0.24
L59734-20	**2A-6 24-40**	45	25	16	14.9	1.7	4	3	0.32	0.24
L59735-01	**2A-6 40-60**	50	28	25	13.6	0.9	4	3	0.32	0.24
L59735-02	**2A-6 60-80**	48	34	25	19.2	0.7	4	3	0.32	0.17
L59735-03	**2A-7 0-7"**	55	27	20	20.4	2	2	3	0.37	0.2
L59735-04	**2A-7 7-20**	51	21	23	21.2	1	4	3	0.32	0.17
L59735-05	**2A-7 20-38**	50	27	24	22.6	0.5	4	3	0.32	0.1
L59735-06	**2B-1 0-9"**	59	21	20	9.6	2.2	2	3	0.37	0.2
L59735-07	**2B-1 9-19**	31	35	34	8.5	0.9	4	5	0.32	0.17
L59735-08	**2B-1 19-33**	16	40	44	15.7	0.9	4	5	0.32	0.1
L59735-09	**2B-1 33-51**	30	36	34	8.7	0.5	4	5	0.32	0.1
L59735-10	**1A-1 0-6"**	36	44	20	20.6	4.5	2	3	0.55	0.43
L59735-11	**1A-1 6-17**	36	45	19	18.2	1	4	3	0.43	0.24
L59735-12	**1A-1 17-28**	40	38	23	20.7	0.7	4	3	0.32	0.17
L59725-13	**1A-1 28-60**	36	35	29	19.1	0.3	4	4	0.32	0.1
L59735-14	**1A-1 60-100**	44	30	27	18.5	0.3	4	3	0.32	0.1
L59735-15	**1A-2 15-25**	49	33	19	18.2	3.4	2	3	0.37	0.24
L59735-16	**1A-2 25-40**	45	39	17	18.1	2.4	4	3	0.32	0.24
L59735-17	**1A-2 40-60**	43	39	19	19.1	1.5	4	3	0.32	0.24
L59735-18	**1A-2 60-75**	46	35	19	16.1	1.7	4	3	0.32	0.17
L59735-19	**1A-2 75-90**	44	39	18	16.3	1.5	4	3	0.32	0.17
L59735-20	**1B-1 0-7**	41	43	16	16.4	5.3	3	3	0.55	0.43
L59736-01	**1B-1 7-15**	43	40	18	16.6	1.4	3	3	0.32	0.24
L59736-02	**1B-1 15-28**	43	45	13	17.6	0.7	4	3	0.43	0.24
L59736-03	**1B-1 28-60**	58	30	13	18.3	0.2	4	3	0.05	0.05

* Organic matter percentage calculated by multiplying Total Organic Carbon by 1.72

[1] Soil Structure Class

1 Very fine Granular
2 Fine granular
3 Coarse granular
4 Blocky, platy, or massive

Source: Soil Erodibility nomograph of Wischmeier et al. (1971) - Wischmeier, W.H. and Smith, D.D. (1978). Predicting rainfall erosion losses - A guide to conservative planning, Agriculture Handbook No. 537. U.S. Department of Agriculture, Washington, D.C.

[2] Permeability Class for Major Textural Class

Permeability Class	Texture	Hydrologic Soil Group
6 Very slow	Silty clay, clay	D
5 Slow	Silty clay loam, sandy cl	C-D
4 Slow to Moderate	Sandy clay loam, clay lo	C-D
3 Moderate	Loam, silt loam	B
2 Moderate to Rapid	Loamy sand, sandy loan	A
1 Rapid	Sand	A+

Source: Rawls et al. (1982) - Rawls, W.J., Brakensiek, D.L., and Saxton, K.E. (1982). Estimation of Soil Water Properties Trans. Am. Soc. Agric. Eng. 25(5): 1316-1320.

[3] Erodibility Factor (Kw and Kf) calculated based on Section 618.45, pgs. 618-30 to 618-32, National Soil Suvrey Handbook. 1993. Soil Conservation Science. Handbook Number 430. U.S. Government Printing Office, Washington, D.C.

Table 8
Kinney #2 Mine Order 2 Soil Survey - Summary of Soil Limitations, Salvage Depths, and Salvageable Volumes

Map Unit	Map Unit	Map Unit	% of Map Unit[1]	Map Unit Area in Proposed Disturbance	Soil Depth Class	Primary Limitations	Range in Depth of Salvageable Primary Plant Growth Medium[2]	Average Depth of Salvageable Primary Plant Growth Medium[2]	Estimated Volume of Salvageable Primary Plant Growth Medium within the Proposed Disturbance
ID #	Name	Component		Acres	Inches		Inches	Inches	Cubic Yards
DA	Disturbed Lands, 0-20 percent slopes	Disturbed Soil	90%	12.70	40-60 plus	available water capacity, coal fines, Total Organic Carbon %	6 to 24	15	25,611.8
		Lo-sk Typic Haploxeroll	10%	1.40		high rock fragment content, availble water capacity	6 to 20	13	2,446.9
DB	Disturbed Lands, 20-50 percent slopes	Disturbed Soils	80%	4.89	60 plus	high rock fragments, coal fines, Total Organic Carbon%	6 to 20	13	8,546.7
		Lo-sk Typic Haploxeroll	10%	0.61		high rock fragment content, steep slopes	7 to 28	17	1,394.2
		Fi-lo Typic Argixeroll	10%	0.61			25-40	30	2,460.3
1B	Coarse-loamy Typic Argicryoll Consociation, 35-70 percent slopes	Co-lo Typic Haplocryoll	80%	0.48	60 plus		20-48	34	2,194.1
		Disturbed Soils*	10%	0.16	40-60	high clay content, K factor, steep slopes	5 to 11	8	172.1
		Lo-sk Typic Argicryoll	10%	0.16	40-60	high rock fragment content, K Factor	14-28	21	451.7
2A	Typic Argixeroll - Typic Haploxeroll Complex, 0-35 percent slopes	Lo-sk Typic Argixeroll	50%	2.27	20-60	high rock content, avaiable water capacity	20-60	40	12,207.6
		Lo-sk Typic Haploxeroll	35%	1.58			20-38	29	6,160.3
		Inclusions	15%	0.67	60 plus		24-60	37	3,332.9
2B	Typic Argixeroll Consociation, 35-70 percent slopes	Lo-sk Typic Argixeroll	80%	1.30	40-60	high clay content, K factor, steep slopes	9 to 19	14	2,446.9
		Disturbed Soils*	10%	0.16	40-60	coal fines, Total Carbon	6 to 20	13	279.6
		shallow to bedrock inclusion*	10%	0.16	10 to 20	bedrock less than 20 inches	0-15	7	150.6
3A	Cumulic Haplocryoll, fine-loamy , 0-3 percent slopes	Cumulic Haplocryoll, fi-lo	80%	0.08	60 plus	high silt content	12 to 24	18	193.6
		Typic Endoaquoll co-lo	20%	0.02	60 plus	Typic Endoaquoll, Disturbed surfaces	12 to 20	16	43.0
				27.3					68,092.4

[1] Percentage of components in map unit.

[2] Primary Plant Growth Medium = Suitability Ratings (See Table 2) of 1 or 2.

* Suitable topsoil for this soil map unit component estimated by interence to soils with similar gnetic characteristics found in the area

Version 1/1/2008

ACZ Laboratories Spreadsheets

Results	ANALYTE																			
CLIENTID	Acid Generation Potential (cal	Acid Neutralization Potential	Acid-Base Potential (calc on S	Boron, soluble (Hot Water)	Calcium, soluble (Sat. Paste)	Carbon, total organic (TOC)	Clay	Conductivity @25C	Magnesium, soluble (Sat. Paste	Neutralization Potential as Ca	Nitrate as N, extractable (KCL	Nitrate/ Nitrite as N, extracta	Nitrite as N, extractable (KCL	Nitrogen, total Kjeldahl	pH, Saturated Paste	Phosphorus, extractable (AB-DT	Potassium, extractable (AB-DTP	Potassium, soluble (Sat. Paste	Sand	Saturation Percent	Selenium, soluble (Hot Water)
1A-1 0-6"					3.15	2.60	20.00	0.54	0.78	0.80	5.40	6.10	0.70	0.27	6.80	32.00	430.00	1.19	36.30	59.20	
1A-1 17-28"					0.55	0.40	22.50	0.16	0.27	0.30	3.90	4.50	0.60	0.04	6.40	19.00	190.00	0.25	40.00	39.50	
1A-1 28-60"					0.89	0.20	28.80	0.22	0.24	0.50	4.50	5.20	0.70	0.03	6.70	25.00	130.00	0.07	36.30	40.90	
1A-1 60-100"					0.96	0.20	26.30	0.27	0.23	0.60	3.10	3.90	0.80	0.02	7.00	22.00	90.00	0.07	43.80	42.20	
1A-1 6-17"					1.11	0.60	18.80	0.25	0.36	0.30	4.20	4.90	0.70	0.05	6.50	27.00	210.00	0.36	36.30	45.80	
1A-2 15-25"					3.73	2.00	18.80	0.48	0.25	1.00	4.10	5.00	0.90	0.19	7.20	10.00	150.00	0.19	48.80	47.30	
1A-2 25-40"					4.30	1.30	16.30	0.52	0.38	0.80	4.60	5.30	0.70	0.14	7.30	23.00	130.00	0.14	45.00	47.70	
1A-2 40-60"					5.92	0.90	18.80	0.76	0.79	0.60	4.00	4.90	0.90	0.09	7.50	33.00	200.00	0.32	42.50	44.30	
1A-2 60-75"					3.26	1.00	18.80	0.45	0.35	0.80	3.50	4.40	0.90	0.09	7.50	34.00	160.00	0.15	46.30	40.90	
1A-2 75-90"					11.40	0.90	17.50	1.25	1.19	0.80	2.90	3.50	0.60	0.08	7.40	56.00	250.00	0.62	43.80	55.80	
1B1 0-7"					3.71	3.10	16.30	0.68	1.06	0.90	5.00	5.70	0.70	0.22	6.90	47.00	520.00	1.69	41.30	64.40	
1B1 15-28"					0.71	0.40	12.50	0.33	0.21	0.40	4.40	4.90	0.50	0.07	6.30	25.00	180.00	0.38	42.50	86.70	
1B1 28-60"					0.68	0.10	12.50	0.29	0.21	0.30	4.10	4.80	0.70	0.02	6.30	18.00	90.00	0.23	57.50	29.90	
1B1 7-15"					1.81	0.80	17.50	0.48	0.46	0.60	4.10	4.80	0.70	0.07	6.60	34.00	310.00	0.82	42.50	130.00	
2A-1 0-10"					1.59	1.20	12.50	0.31	0.45	0.50	4.40	4.70	0.30	0.16	6.60	14.00	280.00	0.52	57.50	46.80	
2A-1 10-24"					1.33	0.40	20.00	0.29	0.51	0.50	7.40	8.00	0.60	0.07	6.70	39.00	220.00	0.34	50.00	34.60	
2A-1 24-44"					1.26	0.40	27.50	0.19	0.25	8.10	34.00	35.00	0.70	0.05	7.50	17.00	120.00	0.06	35.00	44.30	
2A-1 44-65"					1.37	0.20	26.30	0.24	0.29	12.20	7.60	8.40	0.80	0.02	7.70	8.00	90.00	0.08	42.50	40.60	
2A-1 65-80"					1.51	0.20	20.00	0.24	0.34	14.80	6.40	7.10	0.70	0.03	7.80	9.00	60.00	0.08	55.00	34.30	
2A-2 0-5"					1.47	0.80	16.30	0.31	0.46	0.80	5.20	6.00	0.80	0.07	7.00	17.00	290.00	0.49	47.50	44.30	
2A-2 14-25"					0.65	0.50	18.80	0.16	0.23	0.50	47.00	47.70	0.70	0.04	6.90	17.00	210.00	0.20	35.00	32.30	
2A-2 25-38"					0.47	0.20	26.30	0.12	0.23	0.70	41.80	42.50	0.70	0.05	6.90	10.00	160.00	0.12	37.50	37.80	
2A-2 5-14"					1.49	1.40	15.00	0.32	0.44	0.60	7.00	7.80	0.80	0.22	7.00	27.00	450.00	0.91	48.80	45.20	
2A-3 0-9"					0.90	1.70	11.30	0.20	0.28	0.60	9.70	9.70		0.07	6.70	14.00	320.00	0.54	56.30	45.50	
2A-3 19-36"					0.54	0.50	22.50	0.14	0.19	0.50	4.10	4.80	0.70	0.01	6.70	9.00	110.00	0.11	47.50	32.00	
2A-3 36-52"					1.08	0.50	28.80	0.19	0.31	0.80	11.10	11.80	0.70	0.04	7.20	33.00	130.00	0.07	31.30	42.60	
2A-3 9-19"					0.47	0.70	21.30	0.14	0.23	0.50	5.10	5.80	0.70	0.14	6.80	9.00	240.00	0.21	45.00	33.60	
2A-5 0-6"					1.87	1.80	16.30	0.36	0.52	0.80	11.40	11.40		0.18	6.80	25.00	340.00	0.68	46.30	44.70	
2A-5 12-24"					0.37	0.50	31.30	0.11	0.24	0.50	4.20	4.90	0.70	0.06	7.00	7.00	240.00	0.26	28.80	39.20	
2A-5 24-48"					0.24	0.40	40.00	0.09	0.31	0.70	7.00	7.70	0.70	0.05	7.00	8.00	240.00	0.25	22.50	47.30	
2A-5 6-12"					2.15	1.40	21.30	0.36	0.42	0.70	6.50	7.10	0.60	0.11	7.00	14.00	350.00	0.54	46.30	39.60	
2A-6 0-6"					1.14	1.20	15.00	0.23	0.43	0.70	7.20	7.90	0.70	0.16	7.00	24.00	410.00	0.75	47.50	40.90	
2A-6 12-24"					0.96	1.00	16.30	0.18	0.31	0.70	3.50	4.10	0.60	0.10	7.20	19.00	160.00	0.10	45.00	39.20	
2A-6 24-40"					1.27	1.00	16.30	0.22	0.44	0.70	6.10	6.80	0.70	0.11	7.00	23.00	230.00	0.24	45.00	42.80	
2A-6 40-60"					1.54	0.50	25.00	0.51	0.73	1.40	3.90	4.90	1.00	0.04	7.90	31.00	190.00	0.39	50.00	31.60	
2A-6 60-80"					0.99	0.40	25.00	0.35	0.64	1.00	3.60	4.40	0.80	0.03	7.90	28.00	180.00	0.29	47.50	32.90	
2A-6 6-12"					0.84	1.30	16.30	0.19	0.31	0.70	5.30	6.00	0.70	0.13	7.00	22.00	410.00	0.52	50.00	38.80	
2A-7 0-7"					1.24	1.20	20.00	0.35	0.45	0.60	4.60	5.10	0.50	0.15	6.70	17.00	320.00	0.74	55.00	47.80	
2A-7 20-38"					1.06	0.30	23.80	0.28	0.41	0.50	1.90	2.70	0.80	0.04	6.80	14.00	170.00	0.30	50.00	34.20	
2A-7 7-20"					1.45	0.60	22.50	0.40	0.49	0.50	3.80	4.50	0.70	0.06	6.80	17.00	260.00	0.60	51.30	37.40	
2B-1 0-9"					1.11	1.30	20.00	0.30	0.42	0.60	7.90	8.50	0.60	0.17	6.70	17.00	310.00	0.75	58.80	49.70	
2B-1 19-33"					1.42	0.50	43.80	0.29	0.35	1.00	4.20	5.10	0.90	0.07	7.10	6.00	120.00	0.08	16.30	51.60	
2B-1 33-51"					2.52	0.30	33.80	0.42	0.58	6.10	4.40	5.30	0.90	0.04	7.60	3.00	70.00	0.06	30.00	43.40	
2B-1 9-19"					0.67	0.50	33.80	0.15	0.22	0.90	3.20	4.10	0.90	0.06	6.70	5.00	150.00	0.11	31.30	41.00	
D-1 0-6"					1.57	1.40	16.30	0.25	0.12	2.30	1.10	1.10		0.15	7.90	28.00	140.00	0.32	72.50	34.60	
D-1 16-25"					0.82	0.70	16.30	0.18	0.14	3.40	1.60	1.60		0.06	7.50	14.00	70.00	0.10	76.30	35.80	
D-1 25-40"					0.76	0.90	13.80	0.16	0.15	0.20	0.90	0.90		0.06	7.30	29.00	60.00	0.08	73.80	34.60	
D-1 40-65"					1.04	0.60	12.50	0.21	0.22	0.20		0.90	0.80	0.04	7.30	20.00	50.00	0.08	80.00	30.20	
D-1 6-16"					1.28	23.30	15.00	0.22	0.15	1.20	1.10	1.10		0.30	7.10	36.00	80.00	0.07	70.00	53.40	
D-1 65-90"					1.36	0.50	12.50	0.26	0.24	0.50		0.90	0.80	0.03	7.30	20.00	70.00	0.05	83.80	31.10	
D-10 0-5"					3.23	3.30	15.00	0.53	0.67	1.00	1.80	1.80		0.31	7.30	21.00	410.00	1.11	47.50	50.70	
D-10 11-23"					0.82	0.80	38.80	0.22	0.25	0.70	0.90	1.50	0.60	0.08	7.40	7.00	130.00	0.09	26.30	61.70	
D-10 23-35"					0.81	0.70	42.50	0.25	0.39	1.00	2.00	2.70	0.70	0.06	7.30	8.00	130.00	0.19	22.50	69.60	
D-10 5-11"					1.34	3.10	25.00	0.28	0.28	1.70	1.50	2.10	0.60	0.12	7.30	13.00	180.00	0.15	33.80	48.30	

Results	ANALYTE																				
CLIENTID	Acid Generation Potential (cal	Acid Neutralization Potential	Acid-Base Potential (calc on S	Boron, soluble (Hot Water)	Calcium, soluble (Sat. Paste)	Carbon, total organic (TOC)	Clay	Conductivity @25C	Magnesium, soluble (Sat. Paste	Neutralization Potential as Ca	Nitrate as N, extractable (KCL	Nitrate/ Nitrite as N, extracta	Nitrite as N, extractable (KCL	Nitrogen, total Kjeldahl	pH, Saturated Paste	Phosphorus, extractable (AB-DT	Potassium, extractable (AB-DTP	Potassium, soluble (Sat. Paste	Sand	Saturation Percent	Selenium, soluble (Hot Water)
D-11 0-12"					2.98	1.60	25.00	0.42	0.35	3.10	1.80	2.40	0.60	0.08	7.60	15.00	230.00	0.22	42.50	40.80	
D-11 11-48"	12.00	35.00	23.00	1.41	20.50	25.00	17.50	1.63	2.88	3.50	0.70	1.50	0.80	0.24	7.10	2.00	110.00	0.11	62.50	53.20	
D-11 62-82"					12.80	3.60	18.80	1.33	4.28	5.30	0.60	1.30	0.70	0.15	7.60	9.00	140.00	0.16	51.30	44.80	
D-12 0-6"					2.11	3.20	12.50	0.42	0.62	0.70	2.60	2.60		0.25	6.80	22.00	440.00	1.06	50.00	55.90	
D-12 14-28"					0.82	0.70	12.50	0.21	0.31	0.50	1.90	2.60	0.70	0.42	7.00	13.00	170.00	0.20	51.30	36.50	
D-12 28-48"					1.15	0.40	18.80	0.25	0.36	0.60	1.80	2.50	0.70	0.05	7.10	11.00	170.00	0.16	53.80	36.40	
D-12 48-66"					1.63	0.20	18.80	0.30	0.33	2.60	1.90	2.50	0.60	0.03	7.70	11.00	140.00	0.09	56.30	38.00	
D-12 6-14"					1.23	1.00	13.80	0.27	0.41	0.70	2.00	2.70	0.70	0.11	6.80	16.00	240.00	0.38	52.50	42.70	
D-2 0-6"					0.80	1.10	15.00	0.18	0.16	0.60	0.20	0.90	0.70	0.06	7.30	15.00	90.00	0.11	77.50	33.50	
D-2 6-24"					0.16	0.30	13.80	0.50	0.13	0.40		0.90	0.80	0.03	7.30	13.00	80.00	0.08	78.80	33.30	
D-3	14.00	33.00	19.00	2.30	15.30	30.10	15.00	0.16	3.06	3.30	1.00	1.00		0.12	7.30	5.00	80.00	0.13	71.30	59.20	
D-3 0-10"	0.00	14.00	14.00	0.57	1.20	2.30	18.80	0.27	0.21	1.40	1.50	1.50		0.32	7.60	29.00	320.00	0.33	72.50	40.70	
D-3 10-20"	0.00	15.00	15.00	0.66	1.52	1.70	17.50	0.27	0.24	1.50	0.90	0.90		0.11	7.50	20.00	190.00	0.18	71.30	35.30	
D-3 20-40"	0.00	10.00	10.00	0.65	0.68	1.60	18.80	0.17	0.14	1.00	0.40	1.20	0.80	0.09	7.60	16.00	110.00	0.07	72.50	37.00	
D-3 40-60"	0.00	18.00	18.00	0.48	1.13	1.80	17.50	0.25	0.26	1.80	0.20	1.00	0.80	0.10	7.80	17.00	110.00	0.06	72.50	38.90	
D-3 60-75"	4.00	18.00	14.00	1.11	13.40	1.90	17.50	0.16	5.67	1.80	0.40	1.20	0.80	0.16	7.40	15.00	130.00	0.16	72.50	37.90	
D-4 0-8"					0.82	1.40	17.50	0.20	0.13	1.20	1.30	1.30		0.06	7.60	22.00	150.00	0.07	71.30	40.20	
D-4 19-72"	0.00	23.00	23.00	2.25	16.90	3.20	16.30	0.20	8.58	2.30	1.10	1.10		0.68	7.30	4.00	90.00	0.13	77.50	61.60	
D-4 8-16"					0.47	1.30	18.80	0.14	0.12	0.90	0.30	1.10	0.80	0.09	7.80	21.00	150.00	0.06	68.80	39.20	
D-5 0-6"					1.17	1.50	21.30	0.26	0.24	2.30	0.50	1.20	0.70	0.12	7.80	24.00	140.00	0.09	65.00	45.90	
D-5 20-40"					0.34	1.00	21.30	0.12	0.10	2.70	0.90	1.60	0.70	0.04	7.80	20.00	80.00	0.08	63.80	52.20	
D-5 40-60"					1.33	1.60	21.30	0.25	0.31	3.30	7.90	8.60	0.70	0.09	7.70	18.00	80.00	0.08	37.50	52.30	
D-5 6-20"					0.81	1.40	21.30	0.18	0.15	2.60	0.50	1.10	0.60	0.07	7.80	24.00	90.00	0.06	65.00	47.00	
D-6 0-7"					2.48	1.60	22.50	0.28	0.38	3.70	9.00	9.80	0.80	0.09	7.50	15.00	240.00	0.45	30.00	52.10	
D-6 24-48"					3.21	1.30	20.00	0.45	0.76	3.20	3.30	4.10	0.80	0.07	7.50	12.00	70.00	0.09	40.00	54.40	
D-6 48-72"					2.96	1.40	20.00	0.45	0.69	3.30	2.30	3.10	0.80	0.08	7.40	10.00	100.00	0.09	37.50	51.00	
D-7 0-6"					4.92	1.30	20.00	0.69	0.72	2.70	1.90	1.90		0.09	7.20	7.00	250.00	0.67	30.00	49.60	
D-7 20-42"					0.93	0.90	21.30	0.20	0.32	3.30	0.50	1.20	0.70	0.05	7.80	8.00	90.00	0.13	32.50	43.30	
D-7 42-58"					1.63	1.20	22.50	0.30	0.42	2.80		0.90	0.80	0.07	7.60	8.00	110.00	0.09	32.50	54.30	
D-7 58-70"					3.35	0.80	12.50	0.48	0.83	0.80		0.70	0.80	0.07	7.20	16.00	140.00	0.11	52.50	36.50	
D-7 6-20"					2.98	1.10	22.50	0.46	0.56	3.30	0.40	1.20	0.80	0.06	7.50	10.00	130.00	0.15	30.00	47.30	
D-8 0-6"					3.91	2.50	8.80	0.59	0.79	1.20	2.10	2.10		0.22	7.00	25.00	360.00	1.11	52.50	64.60	
D-8 13-20"					0.56	0.40	12.50	0.16	0.23	0.60	0.80	0.80		0.05	7.00	20.00	190.00	0.24	55.00	38.80	
D-8 20-48"					0.60	0.30	16.30	0.18	0.30	0.60		0.80	0.80	0.03	7.30	17.00	200.00	0.22	53.80	38.00	
D-8 6-13"					1.13	1.10	10.00	0.28	0.28	0.80	1.70	1.70		0.15	7.10	20.00	280.00	0.42	55.00	41.50	
D-9A 0-6"					3.48	2.00	16.30	0.45	0.39	2.00	1.00	1.80	0.80	0.12	7.50	11.00	170.00	0.20	47.50	51.60	
D-9A 115-145"	0.00	5.00	5.00	0.57	12.70	0.30	22.50	1.25	2.67	0.50	3.60	4.20	0.60	0.05	7.10	13.00	200.00	0.35	50.00	42.50	
D-9A 12-30"	15.00	42.00	27.00	2.31	1.33	29.60	12.50	0.27	0.28	4.20	0.70	0.70		1.10	7.50	3.00	80.00	0.10	68.80	37.50	
D-9A 30-68"	19.00	54.00	35.00	2.16	20.90	24.40	17.50	2.11	11.00	5.40	0.80	0.80		0.49	7.10	2.00	100.00	0.16	57.50	55.20	
D-9A 6-12"					3.25	2.20	17.50	0.47	0.54	1.90		0.90	0.80	0.12	7.70	11.00	120.00	0.09	50.00	47.60	
D-9A 80-95"	2.00	17.00	15.00	0.91	2.34	4.30	15.00	0.35	0.29	1.70	0.60	1.40	0.80	0.18	7.50	9.00	120.00	0.15	53.80	49.00	
D-9A 95-115"	1.00	13.00	12.00	0.86	1.35	2.40	15.00	0.25	0.29	1.30	1.30	1.90	0.60	0.39	7.70	11.00	150.00	0.05	55.00	51.00	
D-9B 0-6"	0.00	24.00	24.00	0.46	2.76	1.70	25.00	0.43	0.39	2.40	2.90	3.50	0.60	0.13	7.40	20.00	250.00	0.32	35.00	41.50	
D-9B 12-30"	16.00	51.00	35.00	2.27	18.50	23.10	23.80	1.61	3.87	5.10	1.50	1.50		0.73	7.10	3.00	120.00	0.17	50.00	50.30	0.01
D-9B 30-52"	35.00	46.00	11.00	1.41	25.10	54.00	2.50	1.77	1.48	4.60	1.20	1.20		1.43	7.10	1.00	30.00	0.06	93.80	59.00	
D-9B 52-80"	2.00	7.00	5.00	1.73	20.10	1.40	13.80	1.85	6.54	0.70	0.40	1.10	0.70	0.09	7.00	11.00	150.00	0.42	60.00	38.00	
D-9B 6-12"	0.00	22.00	22.00	0.49	2.47	2.40	17.50	0.37	0.39	2.20	0.90	1.60	0.70	0.24	7.40	31.00	170.00	0.12	51.30	34.90	
D-9B 80-102"	0.00	6.00	6.00	0.86	19.40	0.90	15.00	1.73	6.62	0.60	0.40	1.10	0.70	0.06	7.00	11.00	180.00	0.58	53.80	37.90	
Grand Total	6.32	23.84	17.53	1.23	3.45	3.17	19.53	0.42	0.89	1.80	4.38	4.66	0.72	0.14	7.22	17.36	183.53	0.29	50.84	45.20	0.01

Results

CLIENTID	Sieve-53 um (270 mesh)	Sieve-2000 um (2.0 mm)	Silt	Sodium Absorption Ratio	Sodium, soluble (Sat. Paste)	Solids, Percent	Sulfur Organic Residual	Sulfur Pyritic Sulfide	Sulfur Sulfate	Sulfur Total	Total Sulfur minus Sulfate
1A-1 0-6"	79.40	92.50	43.80	0.07	0.11	76.90					
1A-1 17-28"	79.40	86.20	37.50	0.15	0.10	96.10					
1A-1 28-60"	80.90	82.00	35.00	0.51	0.39	92.40					
1A-1 60-100"	81.60	76.90	30.00	0.76	0.59	88.60					
1A-1 6-17"	77.00	92.60	45.00	0.11	0.10	97.00					
1A-2 15-25"	81.70	82.80	32.50	0.17	0.24	88.00					
1A-2 25-40"	81.80	79.60	38.80	0.14	0.22	95.60					
1A-2 40-60"	81.00	84.70	38.80	0.15	0.29	96.10					
1A-2 60-75"	83.90	74.00	35.00	0.16	0.22	96.00					
1A-2 75-90"	83.60	76.00	38.80	0.13	0.33	94.70					
1B1 0-7"	83.70	79.80	42.50	0.11	0.17	75.80					
1B1 15-28"	82.30	79.30	45.00	1.25	0.85	96.80					
1B1 28-60"	81.70	82.40	30.00	0.89	0.60	97.30					
1B1 7-15"	83.30	79.90	40.00	0.57	0.61	91.70					
2A-1 0-10"	75.80	91.80	30.00	0.19	0.20	86.00					
2A-1 10-24"	84.60	72.00	30.00	0.37	0.36	94.60					
2A-1 24-44"	86.10	83.90	37.50	0.20	0.18	94.20					
2A-1 44-65"	87.70	90.60	31.30	0.39	0.36	95.00					
2A-1 65-80"	86.50	90.10	25.00	0.41	0.40	95.10					
2A-2 0-5"	80.50	88.90	36.30	0.33	0.33	87.30					
2A-2 14-25"	87.00	64.50	46.30	0.43	0.29	96.30					
2A-2 25-38"	84.40	70.70	36.30	0.37	0.22	94.10					
2A-2 5-14"	78.00	88.50	36.30	0.33	0.33	86.30					
2A-3 0-9"	72.80	86.80	32.50	0.23	0.18	87.70					
2A-3 19-36"	80.60	75.30	30.00	0.41	0.25	94.70					
2A-3 36-52"	91.00	61.30	40.00	0.33	0.28	93.50					
2A-3 9-19"	82.10	80.70	33.80	0.33	0.20	94.50					
2A-5 0-6"	80.60	80.40	37.50	0.38	0.42	87.10					
2A-5 12-24"	92.80	45.00	40.00	0.38	0.21	91.70					
2A-5 24-48"	95.20	39.30	37.50	0.42	0.22	90.70					
2A-5 6-12"	87.50	60.50	32.50	0.33	0.38	89.00					
2A-6 0-6"	80.30	91.30	37.50	0.16	0.15	84.30					
2A-6 12-24"	82.00	86.80	38.80	0.43	0.35	96.00					
2A-6 24-40"	84.40	79.30	38.80	0.42	0.39	93.60					
2A-6 40-60"	85.20	85.20	25.00	1.39	1.48	94.90					
2A-6 60-80"	86.50	76.50	27.50	1.09	0.98	93.40					
2A-6 6-12"	80.80	83.60	33.80	0.21	0.16	90.40					
2A-7 0-7"	75.80	87.60	25.00	0.55	0.51	86.40					
2A-7 20-38"	79.50	79.40	26.30	0.43	0.37	93.10					
2A-7 7-20"	77.40	86.90	26.30	0.43	0.43	91.80					
2B-1 0-9"	78.80	84.90	21.30	0.18	0.16	82.10					
2B-1 19-33"	90.50	79.60	40.00	0.44	0.42	93.10					
2B-1 33-51"	84.30	88.30	36.30	0.24	0.31	95.90					
2B-1 9-19"	91.30	39.90	35.00	0.37	0.25	94.10					
D-1 0-6"	91.50	75.60	11.30	0.23	0.22	88.10					
D-1 16-25"	91.90	70.00	7.50	0.08	0.06	91.20					
D-1 25-40"	88.60	88.70	12.50	0.11	0.08	95.50					
D-1 40-65"	91.50	78.50	7.50	0.11	0.09	94.30					
D-1 6-16"	87.80	95.40	15.00	0.11	0.10	91.50					
D-1 65-90"	93.80	67.10	3.80	0.15	0.14	94.20					
D-10 0-5"	68.20	81.60	37.50	0.16	0.23	82.60					
D-10 11-23"	97.00	23.00	35.00	0.49	0.36	91.70					
D-10 23-35"	98.00	18.90	35.00	0.43	0.34	91.20					
D-10 5-11"	91.10	47.40	41.30	0.40	0.36	87.40					

Results

CLIENTID	Sieve-53 um (270 mesh)	Sieve-2000 um (2.0 mm)	Silt	Sodium Absorption Ratio	Sodium, soluble (Sat. Paste)	Solids, Percent	Sulfur Organic Residual	Sulfur Pyritic Sulfide	Sulfur Sulfate	Sulfur Total	Total Sulfur minus Sulfate
D-11 0-12"	88.30	57.90	32.50	0.20	0.26	85.50					
D-11 11-48"	93.10	65.80	20.00	0.06	0.23	86.40	0.22	0.07	0.10	0.39	0.29
D-11 62-82"	93.70	32.80	30.00	0.08	0.26	90.30					
D-12 0-6"	76.60	91.00	37.50	0.18	0.21	79.00					
D-12 14-28"	81.20	69.50	36.30	0.35	0.27	94.70					
D-12 28-48"	82.90	67.40	27.50	0.32	0.28	94.60					
D-12 48-66"	76.50	84.40	25.00	0.27	0.27	93.90					
D-12 6-14"	77.30	84.00	33.80	0.30	0.28	84.80					
D-2 0-6"	91.40	68.80	7.50	0.08	0.06	92.20					
D-2 6-24"	91.10	72.60	7.50	0.05	0.02	91.10					
D-3	98.10	49.50	13.80		0.07	90.20	0.23		0.23	0.46	0.23
D-3 0-10"	92.40	81.10	8.80	0.08	0.07	88.80	0.01	0.01		0.02	0.02
D-3 10-20"	92.60	75.20	11.30	0.09	0.09	93.70	0.02			0.02	0.02
D-3 20-40"	91.10	81.70	8.80	0.09	0.06	95.40	0.02		0.01	0.02	0.01
D-3 40-60"	93.10	67.30	10.00	0.08	0.07	93.90	0.02		0.01	0.03	0.02
D-3 60-75"	92.60	79.80	10.00	0.05	0.17	93.80	0.02		0.11	0.13	0.02
D-4 0-8"	90.90	88.70	11.30	0.07	0.05	87.60					
D-4 19-72"	97.60	62.80	6.30		0.08	93.50	0.01	0.01		0.02	0.02
D-4 8-16"	90.80	84.60	12.50	0.05	0.03	94.90					
D-5 0-6"	93.80	76.10	13.80	0.07	0.06	90.00					
D-5 20-40"	94.20	84.70	15.00	0.08	0.04	94.30					
D-5 40-60"	86.90	84.40	41.30	0.33	0.30	91.60					
D-5 6-20"	93.10	89.10	13.80	0.07	0.05	92.20					
D-6 0-7"	87.70	87.60	47.50	0.11	0.14	87.90					
D-6 24-48"	88.70	72.40	40.00	0.21	0.30	94.70					
D-6 48-72"	91.10	61.40	42.50	0.20	0.28	93.00					
D-7 0-6"	90.30	68.20	50.00	0.09	0.16	85.80					
D-7 20-42"	91.50	67.70	46.30	0.12	0.10	92.50					
D-7 42-58"	90.90	70.30	45.00	0.22	0.23	93.00					
D-7 58-70"	76.40	94.60	35.00	0.13	0.20	95.70					
D-7 6-20"	92.90	53.90	47.50	0.12	0.17	87.40					
D-8 0-6"	79.70	92.10	38.80	0.08	0.13	80.40					
D-8 13-20"	75.80	96.90	32.50	0.17	0.11	96.50					
D-8 20-48"	76.10	92.60	30.00	0.17	0.12	95.70					
D-8 6-13"	78.90	90.50	35.00	0.14	0.12	84.90					
D-9A 0-6"	85.60	75.60	36.30	0.09	0.13	87.30					
D-9A 115-145"	81.20	81.50	27.50	0.10	0.30	89.50	0.01		0.01	0.02	0.01
D-9A 12-30"	94.40	59.80	18.80	0.10	0.09	90.90	0.18	0.07	0.23	0.48	0.25
D-9A 30-68"	97.40	51.70	25.00	0.03	0.12	89.40	0.23		0.43	0.62	0.19
D-9A 6-12"	84.60	79.30	32.50	0.08	0.12	88.70					
D-9A 80-95"	85.50	80.30	31.30	0.07	0.09	90.60	0.03		0.03	0.06	0.03
D-9A 95-115"	84.50	74.40	30.00	0.24	0.22	89.70	0.02		0.02	0.04	0.02
D-9B 0-6"	85.00	82.30	40.00	0.18	0.23	86.60	0.02			0.02	0.02
D-9B 12-30"	96.30	47.20	26.30	0.07	0.25	91.90	0.20	0.12	0.20	0.52	0.32
D-9B 30-52"	97.10	72.10	3.80	0.04	0.16	91.50	0.51	0.08	0.54	1.13	0.59
D-9B 52-80"	78.60	82.70	26.30	0.05	0.21	95.50	0.02		0.04	0.05	0.01
D-9B 6-12"	80.70	88.20	31.30	0.17	0.21	85.70	0.03			0.03	0.03
D-9B 80-102"	79.80	82.70	31.30	0.06	0.24	95.90	0.01		0.02	0.03	0.01
Grand Total	85.89	75.68	29.69	0.26	0.25	91.09	0.10	0.06	0.14	0.22	0.11

ACZ Laboratories Lab Analysis Sheets

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

December 21, 2006

Report to:
Clay Wisdom
Carbon Resources
PO Box 1789
Albuquerque, NM 87192

Bill to:
Clay Wisdom
Carbon Resources
PO Box 11789
Albuquerque, NM 87192

cc: Bruce Chesler, Greg Hunt

Project ID:
ACZ Project ID: L59731

Clay Wisdom:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 31, 2006. This project has been assigned to ACZ's project number, L59731. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L59731. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after January 21, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

If you have any questions or other needs, please contact your Project Manager.

Sue Webber 21/Dec/06

Sue Webber, Project Manager, has reviewed and approved this report in its entirety.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Case Narrative

Carbon Resources

December 21, 2006

Project ID:
ACZ Project ID: L59731

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 20 soil samples from Carbon Resources on October 31, 2006. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L59731. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were not performed within EPA recommended holding times. The EPA holding times apply to water samples, not soil so the "H" flags are not applicable.

Sample Analysis

These samples were analyzed for inorganic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The following anomalies required further explanation not provided by the Extended Qualifier Report:

1. For Nitrate/Nitrite, extractable values flagged with an "N1", the Prep Blank (PBS) was detected above the MDL. The data was flagged and accepted since this is considered typical procedural contamination.

2. For Total Kjeldahl Nitrogen values flagged with an "N1", the Laboratory Fortified Blank (LFB) failed high due to suspected ammonia contamination in the tube. The data was flagged and accepted since there are no specified control limits for the soil method.

3. For Phosphorus, extractable values flagged with an "N1", the Prep Blank (PBS) was detected above the MDL. The data was flagged and accepted since this is considered typical procedural contamination.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-1 0-6"

ACZ Sample ID: ***L59731-01***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 11:01	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.57		*	meq/L	0.01	0.05	12/14/06 16:55	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.12		*	meq/L	0.02	0.08	12/14/06 16:55	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	140			mg/Kg	20	50	11/29/06 4:42	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.324		*	meq/L	0.008	0.03	12/14/06 16:55	gme
Sodium Absorption Ratio	Calculation	0.23				0.03	0.15	12/20/06 0:00	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.22		*	meq/L	0.01	0.04	12/14/06 16:55	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.4		*	%	0.1	0.5	11/14/06 15:11	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.247		*	mmhos/cm	0.001	0.01	11/15/06 11:00	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	2.3		*	%	0.1	0.5	11/16/06 8:43	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.9		*	units	0.1	0.1	11/15/06 11:00	srs/aep
Saturation Percent	USDA No. 60 (2)	34.60		*	%	0.01	0.1	11/15/06 11:00	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	91.5		*	% Passing	0.1	0.5	11/29/06 8:00	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	75.6		*	% Passing	0.1	0.5	11/21/06 11:00	as
Solids, Percent	CLPSOW390, PART F, D-98	88.1		*	%	0.1	0.5	11/19/06 16:14	erf/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		16.3		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		72.5		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		11.3		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-1 0-6"

ACZ Sample ID: ***L59731-01***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/21/06 17:28	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:00	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 15:05	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/14/06 17:00	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 8:00	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.1			mg/Kg	0.2	1	12/20/06 0:00	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.1	H	*	mg/Kg	0.2	1	11/29/06 19:41	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	11/29/06 19:41	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.15	H	*	%	0.01	0.05	11/16/06 13:06	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	28	H	*	mg/Kg	1	5	11/28/06 17:48	jag

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-1 6-16"

ACZ Sample ID: ***L59731-02***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 11:32	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.28		*	meq/L	0.01	0.05	12/14/06 17:02	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.15		*	meq/L	0.02	0.08	12/14/06 17:02	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	80			mg/Kg	20	50	11/29/06 4:50	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.070		*	meq/L	0.008	0.03	12/14/06 17:02	gme
Sodium Absorption Ratio	Calculation	0.11	B			0.03	0.15	12/20/06 15:21	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.10		*	meq/L	0.01	0.04	12/14/06 17:02	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	23.3		*	%	0.1	0.5	11/14/06 19:34	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.215		*	mmhos/cm	0.001	0.01	11/15/06 13:18	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.2		*	%	0.1	0.5	11/16/06 9:05	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.1		*	units	0.1	0.1	11/15/06 13:18	srs/aep
Saturation Percent	USDA No. 60 (2)	53.40		*	%	0.01	0.1	11/15/06 13:18	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	87.8		*	% Passing	0.1	0.5	11/29/06 8:12	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	95.4		*	% Passing	0.1	0.5	11/21/06 11:18	as
Solids, Percent	CLPSOW390, PART F, D-98	91.5		*	%	0.1	0.5	11/19/06 18:42	erf/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		15.0		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		70.0		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		15.0		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-1 6-16"

ACZ Sample ID: ***L59731-02***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/21/06 19:25	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:01	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 15:17	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/14/06 18:36	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 8:14	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.1			mg/Kg	0.2	1	12/20/06 15:21	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.1	H	*	mg/Kg	0.2	1	11/29/06 19:43	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	11/29/06 19:43	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.30	H	*	%	0.01	0.06	11/16/06 13:09	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	36	H	*	mg/Kg	1	5	11/28/06 17:51	jag

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-1 16-25"

ACZ Sample ID: ***L59731-03***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 12:03	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.82		*	meq/L	0.01	0.05	12/14/06 17:06	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.14		*	meq/L	0.02	0.08	12/14/06 17:06	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	70			mg/Kg	20	50	11/29/06 5:14	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.096		*	meq/L	0.008	0.03	12/14/06 17:06	gme
Sodium Absorption Ratio	Calculation	0.08	B			0.03	0.15	12/20/06 15:21	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.06		*	meq/L	0.01	0.04	12/14/06 17:06	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.7		*	%	0.1	0.5	11/14/06 21:45	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.182		*	mmhos/cm	0.001	0.01	11/15/06 14:27	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	3.4		*	%	0.1	0.5	11/16/06 9:27	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.5		*	units	0.1	0.1	11/15/06 14:27	srs/aep
Saturation Percent	USDA No. 60 (2)	35.80		*	%	0.01	0.1	11/15/06 14:27	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	91.9		*	% Passing	0.1	0.5	11/29/06 8:25	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	70.0		*	% Passing	0.1	0.5	11/21/06 11:37	as
Solids, Percent	CLPSOW390, PART F, D-98	91.2		*	%	0.1	0.5	11/19/06 19:57	erf/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		16.3		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		76.3		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		7.5		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-1 16-25"

ACZ Sample ID: ***L59731-03***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/21/06 20:24	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:03	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 15:22	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/14/06 19:24	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 8:28	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.6			mg/Kg	0.2	1	12/20/06 15:21	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.6	H	*	mg/Kg	0.2	1	11/29/06 19:46	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	11/29/06 19:46	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.057	H	*	%	0.002	0.008	11/16/06 13:11	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	14	H	*	mg/Kg	1	5	11/28/06 17:52	jag

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-1 25-40"

ACZ Sample ID: ***L59731-04***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 12:19	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.76		*	meq/L	0.01	0.05	12/14/06 17:09	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.15		*	meq/L	0.02	0.08	12/14/06 17:09	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	60			mg/Kg	20	50	11/29/06 5:18	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.081		*	meq/L	0.008	0.03	12/14/06 17:09	gme
Sodium Absorption Ratio	Calculation	0.11	B			0.03	0.15	12/20/06 15:21	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.08		*	meq/L	0.01	0.04	12/14/06 17:09	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.9		*	%	0.1	0.5	11/14/06 23:57	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.158		*	mmhos/cm	0.001	0.01	11/15/06 15:36	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.2	B	*	%	0.1	0.5	11/16/06 9:49	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.3		*	units	0.1	0.1	11/15/06 15:36	srs/aep
Saturation Percent	USDA No. 60 (2)	34.60		*	%	0.01	0.1	11/15/06 15:36	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	88.6		*	% Passing	0.1	0.5	11/29/06 8:37	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	88.7		*	% Passing	0.1	0.5	11/21/06 11:56	as
Solids, Percent	CLPSOW390, PART F, D-98	95.5		*	%	0.1	0.5	11/19/06 21:11	erf/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		13.8		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		73.8		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		12.5		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-1 25-40"

ACZ Sample ID: ***L59731-04***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/21/06 21:22	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:04	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 15:28	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/14/06 20:12	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 8:42	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.9	B		mg/Kg	0.2	1	12/20/06 15:21	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.9	BH	*	mg/Kg	0.2	1	11/29/06 19:47	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	11/29/06 19:47	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.062	H	*	%	0.002	0.01	11/16/06 13:12	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	29	H	*	mg/Kg	1	5	11/28/06 17:54	jag

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-1 40-65"

ACZ Sample ID: ***L59731-05***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 12:34	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.04		*	meq/L	0.01	0.05	12/14/06 17:12	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.22		*	meq/L	0.02	0.08	12/14/06 17:12	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	50	B		mg/Kg	20	50	11/29/06 5:22	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.076		*	meq/L	0.008	0.03	12/14/06 17:12	gme
Sodium Absorption Ratio	Calculation	0.11	B			0.03	0.15	12/20/06 15:21	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.09		*	meq/L	0.01	0.04	12/14/06 17:12	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.6		*	%	0.1	0.5	11/15/06 2:08	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.214		*	mmhos/cm	0.001	0.01	11/15/06 16:45	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.2	B	*	%	0.1	0.5	11/16/06 10:10	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.3		*	units	0.1	0.1	11/15/06 16:45	srs/aep
Saturation Percent	USDA No. 60 (2)	30.20		*	%	0.01	0.1	11/15/06 16:45	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	91.5		*	% Passing	0.1	0.5	11/29/06 8:50	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	78.5		*	% Passing	0.1	0.5	11/21/06 12:15	as
Solids, Percent	CLPSOW390, PART F, D-98	94.3		*	%	0.1	0.5	11/19/06 22:25	erf/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		12.5		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		80.0		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		7.5		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-1 40-65"

ACZ Sample ID: ***L59731-05***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/21/06 22:21	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:06	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 15:34	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/14/06 21:00	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 8:56	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2		U		mg/Kg	0.2	1	12/20/06 15:21	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.9	BH	*	mg/Kg	0.2	1	11/29/06 19:52	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/29/06 19:52	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.036	H	*	%	0.002	0.01	11/16/06 13:13	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	20	H	*	mg/Kg	1	5	11/28/06 17:55	jag

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-1 65-90"

ACZ Sample ID: ***L59731-06***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 12:50	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.36		*	meq/L	0.01	0.05	12/14/06 17:16	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.24		*	meq/L	0.02	0.08	12/14/06 17:16	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	70			mg/Kg	20	50	11/29/06 5:26	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.054		*	meq/L	0.008	0.03	12/14/06 17:16	gme
Sodium Absorption Ratio	Calculation	0.15				0.03	0.15	12/20/06 15:21	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.14		*	meq/L	0.01	0.04	12/14/06 17:16	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.5		*	%	0.1	0.5	11/15/06 4:20	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.257		*	mmhos/cm	0.001	0.01	11/15/06 17:54	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.5	B	*	%	0.1	0.5	11/16/06 10:32	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.3		*	units	0.1	0.1	11/15/06 17:54	srs/aep
Saturation Percent	USDA No. 60 (2)	31.10		*	%	0.01	0.1	11/15/06 17:54	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	93.8		*	% Passing	0.1	0.5	11/29/06 9:03	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	67.1		*	% Passing	0.1	0.5	11/21/06 12:34	as
Solids, Percent	CLPSOW390, PART F, D-98	94.2		*	%	0.1	0.5	11/19/06 23:39	erf/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		12.5		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		83.8		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		3.8		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		LS		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-1 65-90"

ACZ Sample ID: ***L59731-06***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/21/06 23:19	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:07	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 15:40	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/14/06 21:48	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 9:11	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2		U		mg/Kg	0.2	1	12/20/06 15:21	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.9	BH	*	mg/Kg	0.2	1	11/29/06 19:53	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/29/06 19:53	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.033	H	*	%	0.002	.01	11/16/06 13:14	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	20	H	*	mg/Kg	1	5	11/28/06 17:56	jag

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-2 0-6"

ACZ Sample ID: ***L59731-07***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 13:36	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.80		*	meq/L	0.01	0.05	12/14/06 17:26	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.16		*	meq/L	0.02	0.08	12/14/06 17:26	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	90			mg/Kg	20	50	11/29/06 5:30	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.105		*	meq/L	0.008	0.03	12/14/06 17:26	gme
Sodium Absorption Ratio	Calculation	0.08	B			0.03	0.15	12/20/06 15:21	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.06		*	meq/L	0.01	0.04	12/14/06 17:26	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.1		*	%	0.1	0.5	11/15/06 6:31	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.178		*	mmhos/cm	0.001	0.01	11/15/06 19:03	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.6		*	%	0.1	0.5	11/16/06 10:54	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.3		*	units	0.1	0.1	11/15/06 19:03	srs/aep
Saturation Percent	USDA No. 60 (2)	33.50		*	%	0.01	0.1	11/15/06 19:03	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	91.4		*	% Passing	0.1	0.5	11/29/06 9:15	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	68.8		*	% Passing	0.1	0.5	11/21/06 12:53	as
Solids, Percent	CLPSOW390, PART F, D-98	92.2		*	%	0.1	0.5	11/20/06 0:54	erf/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		15.0		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		77.5		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		7.5		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-2 0-6"

ACZ Sample ID: ***L59731-07***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/22/06 0:18	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:09	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 15:45	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/14/06 22:36	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 9:25	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.2	B		mg/Kg	0.2	1	12/20/06 15:21	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.9	BH	*	mg/Kg	0.2	1	11/29/06 19:54	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	11/29/06 19:54	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.060	H	*	%	0.006	0.03	11/16/06 13:52	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	15	H	*	mg/Kg	1	5	11/28/06 17:59	jag

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-2 6-24"

ACZ Sample ID: ***L59731-08***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 13:52	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.16		*	meq/L	0.01	0.05	12/14/06 17:29	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.13		*	meq/L	0.02	0.08	12/14/06 17:29	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	80			mg/Kg	20	50	11/29/06 5:34	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.075		*	meq/L	0.008	0.03	12/14/06 17:29	gme
Sodium Absorption Ratio	Calculation	0.05	B			0.03	0.15	12/20/06 15:21	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.02	B	*	meq/L	0.01	0.04	12/14/06 17:29	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.3	B	*	%	0.1	0.5	11/15/06 8:42	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.497		*	mmhos/cm	0.001	0.01	11/15/06 20:12	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.4	B	*	%	0.1	0.5	11/16/06 11:16	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.3		*	units	0.1	0.1	11/15/06 20:12	srs/aep
Saturation Percent	USDA No. 60 (2)	33.30		*	%	0.01	0.1	11/15/06 20:12	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	91.1		*	% Passing	0.1	0.5	11/29/06 9:28	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	72.6		*	% Passing	0.1	0.5	11/21/06 13:12	as
Solids, Percent	CLPSOW390, PART F, D-98	91.1		*	%	0.1	0.5	11/20/06 2:08	erf/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		13.8		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		78.8		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		7.5		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-2 6-24"

ACZ Sample ID: ***L59731-08***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/22/06 1:17	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:11	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 15:51	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/14/06 23:24	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 9:39	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2		U		mg/Kg	0.2	1	12/20/06 15:21	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.9	BH	*	mg/Kg	0.2	1	11/29/06 19:55	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/29/06 19:55	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.030	H	*	%	0.002	0.009	11/16/06 13:53	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	13	H	*	mg/Kg	1	5	11/28/06 18:00	jag

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3 0-10"

ACZ Sample ID: ***L59731-09***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 14:07	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	0.57		*	mg/Kg	0.05	0.3	11/18/06 4:52	wfg
Calcium, soluble (Sat. Paste)	M6010B ICP	1.20		*	meq/L	0.01	0.05	12/14/06 17:33	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.21		*	meq/L	0.02	0.08	12/14/06 17:33	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	320			mg/Kg	20	50	11/29/06 5:38	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.325		*	meq/L	0.008	0.03	12/14/06 17:33	gme
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	11/30/06 15:22	djt
Sodium Absorption Ratio	Calculation	0.08	B			0.03	0.15	12/20/06 15:21	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.07		*	meq/L	0.01	0.04	12/14/06 17:33	gme

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3 0-10"

ACZ Sample ID: ***L59731-09***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	0			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	14			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	14			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	2.3		*	%	0.1	0.5	11/15/06 10:54	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.271		*	mmhos/cm	0.001	0.01	11/15/06 21:21	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.4		*	%	0.1	0.5	11/16/06 11:38	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.6		*	units	0.1	0.1	11/15/06 21:21	srs/aep
Saturation Percent	USDA No. 60 (2)	40.70		*	%	0.01	0.1	11/15/06 21:21	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	92.4		*	% Passing	0.1	0.5	11/29/06 9:41	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	81.1		*	% Passing	0.1	0.5	11/21/06 13:31	as
Solids, Percent	CLPSOW390, PART F, D-98	88.8		*	%	0.1	0.5	11/20/06 3:22	erf/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.01	B	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Sulfur Pyritic Sulfide		0.01	B	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Sulfur Sulfate			U	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Sulfur Total		0.02	B	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.02	B	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		18.8		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		72.5		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		8.8		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3 0-10"

ACZ Sample ID: ***L59731-09***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/22/06 2:15	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:12	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/17/06 9:15	srs/aep
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 15:57	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/15/06 0:12	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 9:53	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.5			mg/Kg	0.2	1	12/20/06 15:21	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.5	H	*	mg/Kg	0.2	1	11/29/06 19:56	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	11/29/06 19:56	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.32	H	*	%	0.02	0.1	11/16/06 13:54	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	29	H	*	mg/Kg	1	5	11/28/06 18:01	jag

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3 10-20"

ACZ Sample ID: ***L59731-10***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 14:23	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	0.66		*	mg/Kg	0.05	0.3	11/18/06 5:00	wfg
Calcium, soluble (Sat. Paste)	M6010B ICP	1.52		*	meq/L	0.01	0.05	12/14/06 17:36	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.24		*	meq/L	0.02	0.08	12/14/06 17:36	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	190			mg/Kg	20	50	11/29/06 5:42	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.175		*	meq/L	0.008	0.03	12/14/06 17:36	gme
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	11/30/06 15:29	djt
Sodium Absorption Ratio	Calculation	0.09	B			0.03	0.15	12/20/06 15:21	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.09		*	meq/L	0.01	0.04	12/14/06 17:36	gme

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3 10-20"

ACZ Sample ID: ***L59731-10***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	0			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	15			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	15			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.7		*	%	0.1	0.5	11/15/06 13:05	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.273		*	mmhos/cm	0.001	0.01	11/15/06 22:30	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.5		*	%	0.1	0.5	11/16/06 11:59	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.5		*	units	0.1	0.1	11/15/06 22:30	srs/aep
Saturation Percent	USDA No. 60 (2)	35.30		*	%	0.01	0.1	11/15/06 22:30	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	92.6		*	% Passing	0.1	0.5	11/29/06 9:53	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	75.2		*	% Passing	0.1	0.5	11/21/06 13:50	as
Solids, Percent	CLPSOW390, PART F, D-98	93.7		*	%	0.1	0.5	11/20/06 4:37	erf/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.02	B	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Sulfur Pyritic Sulfide			U	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Sulfur Sulfate			U	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Sulfur Total		0.02	B	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.02	B	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		17.5		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		71.3		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		11.3		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3 10-20"

ACZ Sample ID: ***L59731-10***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/22/06 3:14	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:14	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/17/06 9:45	srs/aep
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 16:02	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/15/06 1:00	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 10:07	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.9	B		mg/Kg	0.2	1	12/20/06 15:21	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.9	BH	*	mg/Kg	0.2	1	11/29/06 19:58	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	11/29/06 19:58	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.108	H	*	%	0.004	0.02	11/16/06 13:56	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	20	H	*	mg/Kg	1	5	11/28/06 18:02	jag

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3 20-40"

ACZ Sample ID: ***L59731-11***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 14:38	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	0.65		*	mg/Kg	0.05	0.3	11/18/06 5:24	wfg
Calcium, soluble (Sat. Paste)	M6010B ICP	0.68		*	meq/L	0.01	0.05	12/14/06 17:39	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.14		*	meq/L	0.02	0.08	12/14/06 17:39	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	110			mg/Kg	20	50	11/29/06 5:46	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.073		*	meq/L	0.008	0.03	12/14/06 17:39	gme
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	11/30/06 13:41	djt
Sodium Absorption Ratio	Calculation	0.09	B			0.03	0.15	12/20/06 15:21	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.06		*	meq/L	0.01	0.04	12/14/06 17:39	gme

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3 20-40"

ACZ Sample ID: ***L59731-11***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	0			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	10			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	10			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.6		*	%	0.1	0.5	11/15/06 15:17	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.169		*	mmhos/cm	0.001	0.01	11/15/06 23:39	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.0		*	%	0.1	0.5	11/16/06 12:21	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.6		*	units	0.1	0.1	11/15/06 23:39	srs/aep
Saturation Percent	USDA No. 60 (2)	37.00		*	%	0.01	0.1	11/15/06 23:39	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	91.1		*	% Passing	0.1	0.5	11/29/06 10:06	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	81.7		*	% Passing	0.1	0.5	11/21/06 14:09	as
Solids, Percent	CLPSOW390, PART F, D-98	95.4		*	%	0.1	0.5	11/20/06 5:51	erf/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.02	B	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Sulfur Pyritic Sulfide			U	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Sulfur Sulfate		0.01	B	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Sulfur Total		0.02	B	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.01	B	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		18.8		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		72.5		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		8.8		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3 20-40"

ACZ Sample ID: ***L59731-11***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/22/06 4:12	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:15	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/17/06 10:00	srs/aep
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 16:08	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/15/06 1:48	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 10:22	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.4	B		mg/Kg	0.2	1	12/20/06 15:21	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.2	H	*	mg/Kg	0.2	1	11/29/06 19:59	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/29/06 19:59	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.092	H	*	%	0.003	0.01	11/16/06 13:57	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	16	H	*	mg/Kg	1	5	11/28/06 18:03	jag

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3 40-60"

ACZ Sample ID: ***L59731-12***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 14:54	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	0.48		*	mg/Kg	0.05	0.3	11/18/06 5:28	wfg
Calcium, soluble (Sat. Paste)	M6010B ICP	1.13		*	meq/L	0.01	0.05	12/14/06 17:43	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.26		*	meq/L	0.02	0.08	12/14/06 17:43	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	110			mg/Kg	20	50	11/29/06 5:50	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.058		*	meq/L	0.008	0.03	12/14/06 17:43	gme
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	11/30/06 13:45	djt
Sodium Absorption Ratio	Calculation	0.08	B			0.03	0.15	12/20/06 15:21	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.07		*	meq/L	0.01	0.04	12/14/06 17:43	gme

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3 40-60"

ACZ Sample ID: ***L59731-12***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	0			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	18			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	18			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.8		*	%	0.1	0.5	11/15/06 17:28	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.247		*	mmhos/cm	0.001	0.01	11/16/06 0:48	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.8		*	%	0.1	0.5	11/16/06 12:43	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.8		*	units	0.1	0.1	11/16/06 0:48	srs/aep
Saturation Percent	USDA No. 60 (2)	38.90		*	%	0.01	0.1	11/16/06 0:48	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	93.1		*	% Passing	0.1	0.5	11/29/06 10:18	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	67.3		*	% Passing	0.1	0.5	11/21/06 14:28	as
Solids, Percent	CLPSOW390, PART F, D-98	93.9		*	%	0.1	0.5	11/20/06 7:05	erf/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.02	B	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Sulfur Pyritic Sulfide			U	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Sulfur Sulfate		0.01	B	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Sulfur Total		0.03	B	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.02	B	*	%	0.01	0.1	11/24/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		17.5		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		72.5		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		10.0		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3 40-60"

ACZ Sample ID: ***L59731-12***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/22/06 5:11	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:17	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/17/06 10:15	srs/aep
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 16:14	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/15/06 2:36	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 10:36	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.2	B		mg/Kg	0.2	1	12/20/06 15:21	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.0	H	*	mg/Kg	0.2	1	11/29/06 20:00	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/29/06 20:00	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.095	H	*	%	0.004	0.02	11/16/06 13:58	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	17	H	*	mg/Kg	1	5	11/28/06 18:05	jag

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3 60-75"

ACZ Sample ID: ***L59731-13***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 15:09	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	1.11		*	mg/Kg	0.05	0.3	11/18/06 5:32	wfg
Calcium, soluble (Sat. Paste)	M6010B ICP	13.40		*	meq/L	0.01	0.05	12/14/06 17:46	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	5.67		*	meq/L	0.02	0.08	12/14/06 17:46	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	130			mg/Kg	20	50	11/29/06 6:02	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.157		*	meq/L	0.008	0.03	12/14/06 17:46	gme
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	11/30/06 13:48	djt
Sodium Absorption Ratio	Calculation	0.05	B			0.03	0.15	12/20/06 15:21	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.17		*	meq/L	0.01	0.04	12/14/06 17:46	gme

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3 60-75"

ACZ Sample ID: ***L59731-13***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	4			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	18			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	14			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.9		*	%	0.1	0.5	11/15/06 19:40	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.162		*	mmhos/cm	0.001	0.01	11/16/06 1:57	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.8		*	%	0.1	0.5	11/16/06 13:05	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.4		*	units	0.1	0.1	11/16/06 1:57	srs/aep
Saturation Percent	USDA No. 60 (2)	37.90		*	%	0.01	0.1	11/16/06 1:57	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	92.6		*	% Passing	0.1	0.5	11/29/06 10:31	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	79.8		*	% Passing	0.1	0.5	11/21/06 14:47	as
Solids, Percent	CLPSOW390, PART F, D-98	93.8		*	%	0.1	0.5	11/20/06 8:19	erf/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.02	B	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Pyritic Sulfide			U	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Sulfate		0.11		*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Total		0.13		*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.02	B	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		17.5		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		72.5		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		10.0		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3 60-75"

ACZ Sample ID: ***L59731-13***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/22/06 6:09	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:19	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/17/06 10:30	srs/aep
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 16:20	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/15/06 3:24	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 10:50	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.4	B		mg/Kg	0.2	1	12/20/06 15:21	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.2	H	*	mg/Kg	0.2	1	11/29/06 20:01	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/29/06 20:01	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.16	H	*	%	0.01	0.05	11/16/06 13:59	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	15	H	*	mg/Kg	1	5	11/28/06 18:06	jag

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3

ACZ Sample ID: ***L59731-14***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 15:25	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	2.30		*	mg/Kg	0.05	0.3	11/18/06 5:36	wfg
Calcium, soluble (Sat. Paste)	M6010B ICP	15.30		*	meq/L	0.01	0.05	12/14/06 17:49	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	3.06		*	meq/L	0.02	0.08	12/14/06 17:49	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	80			mg/Kg	20	50	11/29/06 6:06	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.125		*	meq/L	0.008	0.03	12/14/06 17:49	gme
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	11/30/06 13:52	djt
Sodium Absorption Ratio	Calculation		U			0.03	0.15	12/20/06 15:21	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.07		*	meq/L	0.01	0.04	12/14/06 17:49	gme

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3

ACZ Sample ID: ***L59731-14***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	14			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	33			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	19			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	30.1		*	%	0.1	0.5	11/15/06 21:51	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.156		*	mmhos/cm	0.001	0.01	11/16/06 3:06	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	3.3		*	%	0.1	0.5	11/16/06 13:27	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.3		*	units	0.1	0.1	11/16/06 3:06	srs/aep
Saturation Percent	USDA No. 60 (2)	59.20		*	%	0.01	0.1	11/16/06 3:06	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	98.1		*	% Passing	0.1	0.5	11/29/06 10:44	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	49.5		*	% Passing	0.1	0.5	11/21/06 15:06	as
Solids, Percent	CLPSOW390, PART F, D-98	90.2		*	%	0.1	0.5	11/20/06 9:34	erf/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.23		*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Pyritic Sulfide			U	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Sulfate		0.23		*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Total		0.46		*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.23		*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		15.0		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		71.3		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		13.8		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-3

ACZ Sample ID: ***L59731-14***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/22/06 7:08	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:20	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/17/06 10:45	srs/aep
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 16:25	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/15/06 4:12	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 11:04	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.0			mg/Kg	0.2	1	12/20/06 15:21	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.0	H	*	mg/Kg	0.2	1	11/29/06 20:03	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	11/29/06 20:03	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.120		*	%	0.004	0.02	11/16/06 14:00	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	5	H	*	mg/Kg	1	5	11/28/06 18:07	jag

** Please refer to Qualifier Reports for detail*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-4 0-8"

ACZ Sample ID: ***L59731-15***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 15:40	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.82		*	meq/L	0.01	0.05	12/14/06 17:53	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.13		*	meq/L	0.02	0.08	12/14/06 17:53	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	150			mg/Kg	20	50	11/29/06 6:10	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.071		*	meq/L	0.008	0.03	12/14/06 17:53	gme
Sodium Absorption Ratio	Calculation	0.07	B			0.03	0.15	12/20/06 15:21	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.05		*	meq/L	0.01	0.04	12/14/06 17:53	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.4		*	%	0.1	0.5	11/16/06 0:02	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.199		*	mmhos/cm	0.001	0.01	11/16/06 4:15	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.2		*	%	0.1	0.5	11/16/06 13:49	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.6		*	units	0.1	0.1	11/16/06 4:15	srs/aep
Saturation Percent	USDA No. 60 (2)	40.20		*	%	0.01	0.1	11/16/06 4:15	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	90.9		*	% Passing	0.1	0.5	11/29/06 10:56	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	88.7		*	% Passing	0.1	0.5	11/21/06 15:25	as
Solids, Percent	CLPSOW390, PART F, D-98	87.6		*	%	0.1	0.5	11/20/06 10:48	erf/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		17.5		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		71.3		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		11.3		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-4 0-8"

ACZ Sample ID: ***L59731-15***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/22/06 8:07	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:22	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 16:31	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/15/06 5:00	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 11:19	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.3			mg/Kg	0.2	1	12/20/06 15:21	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.3	H	*	mg/Kg	0.2	1	11/29/06 20:07	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	11/29/06 20:07	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.063	H	*	%	0.002	0.01	11/16/06 14:01	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	22	H	*	mg/Kg	1	5	11/28/06 18:08	jag

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-4 8-16"

ACZ Sample ID: ***L59731-16***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 15:56	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.47		*	meq/L	0.01	0.05	12/14/06 17:56	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.12		*	meq/L	0.02	0.08	12/14/06 17:56	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	150			mg/Kg	20	50	11/29/06 6:14	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.058		*	meq/L	0.008	0.03	12/14/06 17:56	gme
Sodium Absorption Ratio	Calculation	0.05	B			0.03	0.15	12/20/06 15:21	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.03	B	*	meq/L	0.01	0.04	12/14/06 17:56	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.3		*	%	0.1	0.5	11/16/06 2:14	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.136		*	mmhos/cm	0.001	0.01	11/16/06 5:24	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.9		*	%	0.1	0.5	11/16/06 14:10	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.8		*	units	0.1	0.1	11/16/06 5:24	srs/aep
Saturation Percent	USDA No. 60 (2)	39.20		*	%	0.01	0.1	11/16/06 5:24	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	90.8		*	% Passing	0.1	0.5	11/29/06 11:09	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	84.6		*	% Passing	0.1	0.5	11/21/06 15:44	as
Solids, Percent	CLPSOW390, PART F, D-98	94.9		*	%	0.1	0.5	11/20/06 12:02	erf/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		18.8		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		68.8		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		12.5		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-4 8-16"

ACZ Sample ID: ***L59731-16***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/22/06 9:05	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:23	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 16:37	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/15/06 5:48	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 11:33	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.3	B		mg/Kg	0.2	1	12/20/06 15:21	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.1	H	*	mg/Kg	0.2	1	11/29/06 20:09	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/29/06 20:09	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.089	H	*	%	0.002	0.01	11/16/06 14:02	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	21	H	*	mg/Kg	1	5	11/28/06 18:09	jag

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-4 19-72"

ACZ Sample ID: ***L59731-17***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 16:42	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	2.25		*	mg/Kg	0.05	0.3	11/18/06 5:40	wfg
Calcium, soluble (Sat. Paste)	M6010B ICP	16.90		*	meq/L	0.01	0.05	12/14/06 18:06	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	8.58		*	meq/L	0.02	0.08	12/14/06 18:06	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	90			mg/Kg	20	50	11/29/06 6:19	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.129		*	meq/L	0.008	0.03	12/14/06 18:06	gme
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	11/30/06 13:56	djt
Sodium Absorption Ratio	Calculation		U			0.03	0.15	12/20/06 15:21	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.08		*	meq/L	0.01	0.04	12/14/06 18:06	gme

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-4 19-72"

ACZ Sample ID: ***L59731-17***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	0			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	23			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	23			t CaCO3/Kt	1	5	12/20/06 15:21	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	3.2		*	%	0.1	0.5	11/16/06 4:25	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.195		*	mmhos/cm	0.001	0.01	11/16/06 6:33	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	2.3		*	%	0.1	0.5	11/16/06 14:32	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.3		*	units	0.1	0.1	11/16/06 6:33	srs/aep
Saturation Percent	USDA No. 60 (2)	61.60		*	%	0.01	0.1	11/16/06 6:33	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	97.6		*	% Passing	0.1	0.5	11/29/06 11:22	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	62.8		*	% Passing	0.1	0.5	11/21/06 16:03	as
Solids, Percent	CLPSOW390, PART F, D-98	93.5		*	%	0.1	0.5	11/20/06 13:17	erf/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.01	B	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Pyritic Sulfide		0.01	B	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Sulfate			U	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Total		0.02	B	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.02	B	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		16.3		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		77.5		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		6.3		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-4 19-72"

ACZ Sample ID: ***L59731-17***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/22/06 10:04	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:25	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/17/06 11:00	srs/aep
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 16:42	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/15/06 6:36	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 11:47	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.1			mg/Kg	0.2	1	12/20/06 15:21	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.1	H	*	mg/Kg	0.2	1	11/29/06 20:10	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	11/29/06 20:10	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.68		*	%	0.02	0.1	11/16/06 14:06	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	4	BH	*	mg/Kg	1	5	11/28/06 18:12	jag

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-5 0-6"

ACZ Sample ID: ***L59731-18***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 16:58	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.17		*	meq/L	0.01	0.05	12/14/06 18:10	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.24		*	meq/L	0.02	0.08	12/14/06 18:10	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	140			mg/Kg	20	50	11/29/06 6:23	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.093		*	meq/L	0.008	0.03	12/14/06 18:10	gme
Sodium Absorption Ratio	Calculation	0.07	B			0.03	0.15	12/20/06 15:22	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.06		*	meq/L	0.01	0.04	12/14/06 18:10	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.5		*	%	0.1	0.5	11/16/06 6:37	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.258		*	mmhos/cm	0.001	0.01	11/16/06 7:42	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	2.3		*	%	0.1	0.5	11/16/06 14:54	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.8		*	units	0.1	0.1	11/16/06 7:42	srs/aep
Saturation Percent	USDA No. 60 (2)	45.90		*	%	0.01	0.1	11/16/06 7:42	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	93.8		*	% Passing	0.1	0.5	11/29/06 11:34	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	76.1		*	% Passing	0.1	0.5	11/21/06 16:22	as
Solids, Percent	CLPSOW390, PART F, D-98	90.0		*	%	0.1	0.5	11/20/06 14:31	erf/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		21.3		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		65.0		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		13.8		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SCL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-5 0-6"

ACZ Sample ID: ***L59731-18***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/22/06 11:02	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:26	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 16:48	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/15/06 7:24	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 12:01	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.5	B		mg/Kg	0.2	1	12/20/06 15:22	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.2	H	*	mg/Kg	0.2	1	11/29/06 20:11	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	11/29/06 20:11	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.115	H	*	%	0.003	0.02	11/16/06 14:07	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	24	H	*	mg/Kg	1	5	11/28/06 18:14	jag

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-5 6-20"

ACZ Sample ID: ***L59731-19***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 17:13	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.81		*	meq/L	0.01	0.05	12/14/06 18:13	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.15		*	meq/L	0.02	0.08	12/14/06 18:13	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	90			mg/Kg	20	50	11/29/06 6:27	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.064		*	meq/L	0.008	0.03	12/14/06 18:13	gme
Sodium Absorption Ratio	Calculation	0.07	B			0.03	0.15	12/20/06 15:22	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.05		*	meq/L	0.01	0.04	12/14/06 18:13	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.4		*	%	0.1	0.5	11/16/06 8:48	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.180		*	mmhos/cm	0.001	0.01	11/16/06 8:51	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	2.6		*	%	0.1	0.5	11/16/06 15:16	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.8		*	units	0.1	0.1	11/16/06 8:51	srs/aep
Saturation Percent	USDA No. 60 (2)	47.00		*	%	0.01	0.1	11/16/06 8:51	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	93.1		*	% Passing	0.1	0.5	11/29/06 11:47	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	89.1		*	% Passing	0.1	0.5	11/21/06 16:41	as
Solids, Percent	CLPSOW390, PART F, D-98	92.2		*	%	0.1	0.5	11/20/06 15:45	erf/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		21.3		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		65.0		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		13.8		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SCL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-5 6-20"

ACZ Sample ID: ***L59731-19***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/22/06 12:01	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:28	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 16:54	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/15/06 8:12	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 12:15	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.5	B		mg/Kg	0.2	1	12/20/06 15:22	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.1	H	*	mg/Kg	0.2	1	11/29/06 20:12	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.6	H	*	mg/Kg	0.1	0.5	11/29/06 20:12	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.070	H	*	%	0.002	0.01	11/16/06 14:08	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	24	H	*	mg/Kg	1	5	11/28/06 18:15	jag

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-5 20-40"

ACZ Sample ID: ***L59731-20***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/14/06 17:29	jlf

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.34		*	meq/L	0.01	0.05	12/14/06 18:16	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.10		*	meq/L	0.02	0.08	12/14/06 18:16	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	80			mg/Kg	20	50	11/29/06 6:31	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.079		*	meq/L	0.008	0.03	12/14/06 18:16	gme
Sodium Absorption Ratio	Calculation	0.08	B			0.03	0.15	12/20/06 15:22	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.04		*	meq/L	0.01	0.04	12/14/06 18:16	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.0		*	%	0.1	0.5	11/16/06 11:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.121		*	mmhos/cm	0.001	0.01	11/16/06 10:00	srs/aep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	2.7		*	%	0.1	0.5	11/16/06 15:38	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.8		*	units	0.1	0.1	11/16/06 10:00	srs/aep
Saturation Percent	USDA No. 60 (2)	52.20		*	%	0.01	0.1	11/16/06 10:00	srs/aep
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	94.2		*	% Passing	0.1	0.5	11/29/06 12:00	as/rje
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	84.7		*	% Passing	0.1	0.5	11/21/06 17:00	as
Solids, Percent	CLPSOW390, PART F, D-98	94.3		*	%	0.1	0.5	11/20/06 16:59	erf/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		21.3		*	%	0.1	0.5	11/27/06 0:00	brg
Sand		63.8		*	%	0.1	0.5	11/27/06 0:00	brg
Silt		15.0		*	%	0.1	0.5	11/27/06 0:00	brg
Texture Classification		SCL		*				11/27/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-5 20-40"

ACZ Sample ID: ***L59731-20***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/22/06 12:59	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:30	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 17:00	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/15/06 9:00	erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 12:30	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.9	B		mg/Kg	0.2	1	12/20/06 15:22	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.6	H	*	mg/Kg	0.2	1	11/29/06 20:14	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	11/29/06 20:14	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.035	H	*	%	0.002	0.01	11/16/06 14:09	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	20	H	*	mg/Kg	1	5	11/28/06 18:16	jag

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Reference

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calivation Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic QC Summary

Carbon Resources
Project ID:

ACZ Project ID: ***L59731***

Boron, soluble (Hot Water) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216774													
WG216774ICV	ICV	11/18/06 4:16	II061113-6	2		1.938	mg/L	96.9	90	110			
WG216774ICB	ICB	11/18/06 4:20				U	mg/L		-0.03	0.03			
L59459-01DUP	DUP	11/18/06 4:44			.4	.4	mg/L				0	20	
WG216738PBS	PBS	11/18/06 4:48				U	mg/L		-0.15	0.15			
L59731-09DUP	DUP	11/18/06 4:56			.57	.72	mg/L				23.3	20	RC
L59731-10AS	AS	11/18/06 5:16	II061116-2	2.5	.66	3.185	mg/L	101	75	125			
L59731-10ASD	ASD	11/18/06 5:20	II061116-2	2.5	.66	3.202	mg/L	101.7	75	125	0.53	20	

Calcium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217041													
WG217041ICV	ICV	12/14/06 16:39	II061113-6	100		97.37	mg/L	97.4	90	110			
WG217041ICB	ICB	12/14/06 16:42				U	mg/L		-0.6	0.6			
L59731-01DUP	DUP	12/14/06 16:59			1.57	.904	meq/L				53.8	20	RC

Carbon, total organic (TOC) ASA No.9 29-2.2.4 Combustion/IR

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216535													
WG216535PBS	PBS	11/14/06 13:00				U	%		-0.3	0.3			
L59731-01DUP	DUP	11/14/06 17:22			1.4	1.3	%				7.4	20	

Conductivity @25C M120.1 - Meter, w/ Saturated Paste Prep

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216612													
L59731-01DUP	DUP	11/15/06 12:09			.247	.223	mmhos/cm				10.2	20	

Magnesium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217041													
WG217041ICV	ICV	12/14/06 16:39	II061113-6	100		96.52	mg/L	96.5	90	110			
WG217041ICB	ICB	12/14/06 16:42				U	mg/L		-0.6	0.6			
L59731-01DUP	DUP	12/14/06 16:59			.12	.063	meq/L				61.8	20	RC

Neutralization Potential as CaCO3 M600/2-78-054 3.2.3

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216720													
WG216720LCSS	LCSS	11/16/06 8:00	PCN20880	100		91.19	%						
L59731-20DUP	DUP	11/16/06 15:59			2.7	2.61	%				3.4	20	

Carbon Resources ACZ Project ID: ***L59731***

Project ID:

Nitrate/Nitrite as N, extractable (KCL) M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217339													
WG217339ICV	ICV	11/29/06 19:33	WI060906-3	2.416		2.352	mg/L	97.4	90	110			
WG217339ICB	ICB	11/29/06 19:34				.027	mg/L		-0.06	0.06			
WG217339LFB	LFB	11/29/06 19:38	WI060906-4	2		2.055	mg/L	102.8	90	110			
WG217122PBS	PBS	11/29/06 19:39				.95	mg/Kg		-0.6	0.6			N1
L59731-01DUP	DUP	11/29/06 19:42			1.1	1.1	mg/Kg				0	20	RA
L59731-02AS	AS	11/29/06 19:44	WI060906-4	20	1.1	21.28	mg/Kg	100.9	75	125			

Nitrite as N, extractable (KCL) M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217339													
WG217339ICV	ICV	11/29/06 19:33	WI060906-3	.609		.644	mg/L	105.7	90	110			
WG217339ICB	ICB	11/29/06 19:34				U	mg/L		-0.03	0.03			
WG217339LFB	LFB	11/29/06 19:38	WI060906-4	1		1.029	mg/L	102.9	90	110			
WG217122PBS	PBS	11/29/06 19:39				.78	mg/Kg		-0.3	0.3			N1
L59731-01DUP	DUP	11/29/06 19:42			U	U	mg/Kg				0	20	RA
L59731-02AS	AS	11/29/06 19:44	WI060906-4	10	U	9.81	mg/Kg	98.1	75	125			

Nitrogen, total Kjeldahl M351.2 - TKN by Block Digester

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216678													
WG216503ICV	ICV	11/16/06 13:02	WI061027-1	4		3.9	mg/L	97.5	90	110			
WG216503ICB	ICB	11/16/06 13:03				U	mg/L		-0.3	0.3			
WG216503PBS	PBS	11/16/06 13:04				.0039	%		-0.006	0.006			
WG216503LFB	LFB	11/16/06 13:05	WI061027-5	2.5		2.91	%	116.4	85	115			N1
L59731-01MS	MS	11/16/06 13:08	5XPTSTKN	.0535	.15	.238	%	164.5	75	125			M1
L59731-02DUP	DUP	11/16/06 13:10			.3	.307	%				2.3	20	
WG216678ICV1	ICV	11/16/06 13:46	WI061027-1	4		3.62	mg/L	90.5	90	110			
WG216678ICB1	ICB	11/16/06 13:47				U	mg/L		-0.3	0.3			
WG216678ICV2	ICV	11/16/06 13:50	WI061027-1	4		3.67	mg/L	91.8	90	110			
WG216678ICB2	ICB	11/16/06 13:51				U	mg/L		-0.3	0.3			

Percent Clay ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217118													
L59731-01DUP	DUP	11/27/06 12:45			16.3	16.3	%				0	20	

Percent Sand ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217118													
L59731-01DUP	DUP	11/27/06 12:45			72.5	72.5	%				0	20	

Percent Silt ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217118													
L59731-01DUP	DUP	11/27/06 12:45			11.3	11.3	%				0	20	

Carbon Resources
Project ID:

ACZ Project ID: ***L59731***

pH, Saturated Paste USDA No. 60 (21A)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216612													
L59731-01DUP	DUP	11/15/06 12:09			7.9	7.48	units				5.5	20	

Phosphorus, extractable (AB-DTPA) M365.1 - Automated Ascorbic Acid

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217261													
WG217261ICV	ICV	11/28/06 17:43	SCN000224	.65228		.686	mg/L	105.2	90	110			
WG217261ICB	ICB	11/28/06 17:45				U	mg/L		-0.03	0.03			
WG217261LFB	LFB	11/28/06 17:46	WI061125-2	.5		.515	mg/Kg	103	85	115			
WG216998PBS	PBS	11/28/06 17:47				7.2	mg/Kg		-3	3			N1
L59731-01AS	AS	11/28/06 17:49	WI061125-2	50	28	79.1	mg/Kg	102.2	75	125			
L59731-01DUP	DUP	11/28/06 17:50			28	27.4	mg/Kg				2.2	20	

Potassium, extractable (AB-DTPA) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217217													
WG217217ICV	ICV	11/29/06 4:17	II061113-6	20		20.17	mg/L	100.9	90	110			
WG217217ICB	ICB	11/29/06 4:21				U	mg/L		-0.9	0.9			
WG216998PBS	PBS	11/29/06 4:37				U	mg/L		-60	60			
L59731-01DUP	DUP	11/29/06 4:46			140	140	mg/L				0	20	
L59731-02AS	AS	11/29/06 4:58	II061116-2	4973.4095	80	5197	mg/L	102.9	75	125			
L59731-02ASD	ASD	11/29/06 5:02	II061116-2	4973.4095	80	5305	mg/L	105.1	75	125	2.06	20	

Potassium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217041													
WG217041ICV	ICV	12/14/06 16:39	II061113-6	20		19.94	mg/L	99.7	90	110			
WG217041ICB	ICB	12/14/06 16:42				U	mg/L		-0.9	0.9			
L59731-01DUP	DUP	12/14/06 16:59			.324	.1741	meq/L				60.2	20	RC

Saturation Percent USDA No. 60 (2)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216612													
L59731-01DUP	DUP	11/15/06 12:09			34.6	36.33	%				4.9	20	

Carbon Resources ACZ Project ID: ***L59731***

Project ID:

Selenium, soluble (Hot Water) SM3500-Se.C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217220													
WG217220ICV	ICV	11/30/06 10:30	II061127-5	.025		.0272	mg/L	108.8	90	110			
WG217220ICB	ICB	11/30/06 10:33				U	mg/L		-0.003	0.003			
WG217223													
L59732-20AS	AS	11/30/06 14:14	II061113-3	.1	U	.097	mg/Kg	97	85	115			
L59732-20ASD	ASD	11/30/06 14:25	II061113-3	.1	U	.0985	mg/Kg	98.5	85	115	1.53	20	
WG216738PBS	PBS	11/30/06 15:18				U	mg/Kg		-0.015	0.015			
L59731-09DUP	DUP	11/30/06 15:25			U	U	mg/Kg				0	20	RA
L59731-10AS	AS	11/30/06 15:33	II061113-3	.1	U	.0961	mg/Kg	96.1	85	115			
L59731-10ASD	ASD	11/30/06 15:36	II061113-3	.1	U	.0958	mg/Kg	95.8	85	115	0.31	20	

Sodium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217041													
WG217041ICV	ICV	12/14/06 16:39	II061113-6	100		99.89	mg/L	99.9	90	110			
WG217041ICB	ICB	12/14/06 16:42				U	mg/L		-0.9	0.9			
L59731-01DUP	DUP	12/14/06 16:59			.22	.161	meq/L				30.7	20	RC

Solids, Percent CLPSOW390, PART F, D-98

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216793													
WG216793PBS	PBS	11/19/06 15:00				U	%		99.9	100.1			
L59731-01DUP	DUP	11/19/06 17:28			88.1	88.45	%				0.4	20	

Sulfur Organic Residual M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217075													
L59732-20DUP	DUP	11/25/06 18:00			.02	.02	%				0	20	RA

Sulfur Pyritic Sulfide M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217075													
L59732-20DUP	DUP	11/25/06 18:00			U	U	%				0	20	RA

Sulfur Sulfate M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217075													
L59732-20DUP	DUP	11/25/06 18:00			.02	.02	%				0	20	RA

Sulfur Total M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217075													
WG217075PBS	PBS	11/24/06 11:00				U	%		-0.03	0.03			
WG217075LCSS	LCSS	11/24/06 13:23	PCN25383	4.24		4.3	%		80	120			
L59732-20DUP	DUP	11/25/06 18:00			.04	.04	%				0	20	RA

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Inorganic QC Summary

Carbon Resources
Project ID:

ACZ Project ID: ***L59731***

Total Sulfur Minus Sulfate M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217075													
L59732-20DUP	DUP	11/25/06 18:00			.02	.02	%				0	20	RA

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Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59731***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-01	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59731***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-02	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59731***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-03	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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Carbon Resources

ACZ Project ID: ***L59731***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-04	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59731***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-05	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-06	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ Project ID: ***L59731***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-07	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-08	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-09	WG216774	Boron, soluble (Hot Water)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217223	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217041	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217075	Sulfur Organic Residual	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Total Sulfur minus Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-10	WG216774	Boron, soluble (Hot Water)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217223	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217041	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217075	Sulfur Organic Residual	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Total Sulfur minus Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-11	WG216774	Boron, soluble (Hot Water)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217223	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217041	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217075	Sulfur Organic Residual	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Total Sulfur minus Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-12	WG216774	Boron, soluble (Hot Water)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217223	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217041	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217075	Sulfur Organic Residual	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Total Sulfur minus Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-13	WG216774	Boron, soluble (Hot Water)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217223	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217041	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217075	Sulfur Organic Residual	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Total Sulfur minus Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

Carbon Resources

ACZ Project ID: ***L59731***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-14	WG216774	Boron, soluble (Hot Water)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217223	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217041	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217075	Sulfur Organic Residual	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Total Sulfur minus Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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Carbon Resources

ACZ Project ID: ***L59731***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-15	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ Project ID: ***L59731***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-16	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ Project ID: ***L59731***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-17	WG216774	Boron, soluble (Hot Water)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217223	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217041	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217075	Sulfur Organic Residual	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Total Sulfur minus Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ Project ID: ***L59731***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-18	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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Carbon Resources

ACZ Project ID: ***L59731***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-19	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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Carbon Resources

ACZ Project ID: ***L59731***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59731-20	WG217041	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217339	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216678	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	N1	See Case Narrative.
	WG217261	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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Certification Qualifiers

Carbon Resources

ACZ Project ID: ***L59731***

Metals Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Selenium, soluble (Hot Water)	SM3500-Se.C

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3
pH, Saturated Paste	USDA No. 60 (21A)
Saturation Percent	USDA No. 60 (2)
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2
Solids, Percent	CLPSOW390, PART F, D-98
Sulfur Forms	M600/2-78-054 3.2.4
Texture by Hydrometer	ASTM D 422 Hydrometer

Wet Chemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid

ACZ Laboratories, Inc.

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Sample Receipt

Carbon Resources

ACZ Project ID: L59731
Date Received: 10/31/2006
Received By:
Date Printed: 10/31/2006

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?			X
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
BUCKET X 8		22.5	16

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

ACZ Laboratories, Inc.
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Sample Receipt

Carbon Resources

ACZ Project ID: L59731
Date Received: 10/31/2006
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L59731-01	D-1 0-6"									X		
L59731-02	D-1 6-16"									X		
L59731-03	D-1 16-25"									X		
L59731-04	D-1 25-40"									X		
L59731-05	D-1 40-65"									X		
L59731-06	D-1 65-90"									X		
L59731-07	D-2 0-6"									X		
L59731-08	D-2 6-24"									X		
L59731-09	D-3 0-10"									X		
L59731-10	D-3 10-20"									X		
L59731-11	D-3 20-40"									X		
L59731-12	D-3 40-60"									X		
L59731-13	D-3 60-75"									X		
L59731-14	D-3									X		
L59731-15	D-4 0-8"									X		
L59731-16	D-4 8-16"									X		
L59731-17	D-4 19-72"									X		
L59731-18	D-5 0-6"									X		
L59731-19	D-5 6-20"									X		
L59731-20	D-5 20-40"									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L59731

Carbon Resources Soil Sample Increments
Kinney Mine, Scofield Utah
Sampled October 14-18, 2006
By Bruce Chesler and Greg Hunt
Telephone 435-826-4961
Billed to Carbon Resources

Mailed UPS on October 24, 2006 to:
ACZ Laboratory
2773 Downhill Drive
Steamboat Springs, Colorado, 80487
Attn. Sue Webber telephone 1-800-334-5493 Ext.110

Soil Samples sent in 5-gallon white plastic buckets from Escalante, Utah, and coal samples sent separately in a bucket from Cedaredege, Colorado. The coal sample increments are required to have the following additional analyses, along with the soil horizons found above and below them in their respective soil positions. These will include soil horizons and coal materials sampled at 3 locations, (D3, D9A, D9B) including a total of 19 samples.

Total Organic Carbon (Combustion Method, Western States Lab Testing Program, 1998, volume 4.10, page 88)
Soluble Selenium reported in mg/kg (Hydric Generation AA-Spectrometry and Flourimetry of water extracted Selenium)
Available Boron reported in mg/kg (saturation extract)
Acid Potential reported % pyric S
Neutralization Potential Tons CaCo3 equivalent/1000 tons

The remaining samples are as follows:

D1 0-6, 6-16, 16-25, 25-40, 40-65, 65-90 (6 samples)

D2 0-6, 6-24 (2 samples)

D3 Coal and Soil sent in separate shipments 0-10, 10-20, 20-40, 40-60, 60-75, 1 coal (7)

D4 0-8, 8-16, (2 samples)

D5 0-6, 6-20, 20-40, 40-60 (4 samples)

D6 0-7, coal not sampled, 24-48, 48-72 (3 samples)

D7 0-6, 6-20, 20-42, 42-58, 58-70 (5 samples)

D8 0-6, 6-13, 13-26, 26-48 (4 samples)

D9A coal and soil sent in two shipments 0-6, 6-12, 12-30, 30-68, 68-95, 95-115, 115-140 (7 samples)

D9B coal and soil sent separately 0-6, 6-12, 12-30, 30-52, 52-80, 80-102 (6 samples)

D10 0-5, 5-11, 11-23, 23-35 (4 samples)

D11 0-12, did not sample coal, 62-82 (2samples)

D12 0-6, 6-14, 14-28, 28-48, 48-66 (5 samples)

2A-1 0-10, 10-24, 24-44, 44-65, 65-80 (5 samples)

2A-2 0-5, 5-14, 14-25, 25-38 (4 samples)

2A-3 0-9, 9-19, 19-36, 36-52 (4 samples)

2A-5 0-6, 6-12, 12-24, 24-48 (4 samples)

2A-6 0-6, 6-12, 12-24, 24-40, 40-66, 66-80 (6 samples)

2A-7 0-7, 7-20, 20-38 (3 samples)

2B-1 0-9, 9-19, 19-33, 33-51 (4 samples)

1A-1 0-6, 6-17, 17-28, 28-60, 60-100 (5 samples)

1A-2 15-25, 25-40, 40-60, 60-75, 75-90 (5 samples)

1B1 0-7, 7-15, 15-28, 28-60 (4 samples)

Please give me a call if you have any questions on methodology at my office. Phone # 435-826-4961

Thanks,
Bruce Chesler
Representing, Carbon Resources
Escalante, Utah

LSG 10-26-06

Sue Webber

From: GHuntBBC@aol.com
Sent: Friday, October 27, 2006 12:52 PM
To: bches@scinternet.net; Sue Webber
Subject: Sue Weber Carbon Resources Soil Samples

FROM: **Geo-Hunt Consulting**
16577 Columbine Lane
Cedaredge, CO 81413
970-856-9477

TO: **Sue Webber, Project Manager**
ACZ Laboratories, Inc.
2773 Downhill Drive,
Steamboat Springs, Co 80487

RE: **TRANSMITTAL OF SOIL SAMPLES**

Dear Sue:
You have already received a rather large number of samples from BRUCE CHESLER, soil scientist from Escalante Utah, from the Carbon Resources "Kinney" Property, Scofield Utah. Enclosed please find the following seven soil samples taken from the same property and are a part of the same project. These samples should be processed with those received directly from Bruce and all of the results should be returned to Bruce.

D3
D4 19"-72"
D9-A 12"- 30"
D9-A 30"- 68"
D9-B 12"- 30"
D9-B 30"- 50"
D11 11"-48"

Note that some of the bag samples received from Bruce and or I may be labeled either Carbon Resources or Kinney. Both names indicate the same project.

Thank you for your prompt attention to this project.

Greg Hunt

Cc: Bruce Chesler

10/31/2006

Very Fine Sand

analyst: as
date: 12-7-06

ACZ L#	Total sample wt. gms	% <2000um sieve	Wt. of sxs used for Texture gms	Wt. of sxs between 105um & 53um gm.	% VFS
L59731-01	236.40	75.6	40.0	4.5	**8.5**
L59731-02	210.40	95.4	40.0	5.1	**12.2**
L59731-03	368.20	70.0	40.0	4.6	**8.1**
L59731-04	268.60	88.7	40.0	5.1	**11.4**
L59731-05	222.00	78.5	40.0	4.3	**8.5**
L59731-06	242.80	67.1	40.0	3.7	**6.2**
L59731-07	336.60	68.8	40.0	5.0	**8.6**
L59731-08	314.90	72.6	40.0	4.9	**8.9**
L59731-09	270.98	81.1	40.0	3.8	**7.6**
L59731-10	318.20	75.2	40.0	4.0	**7.4**
L59731-11	342.70	81.7	40.0	4.4	**8.9**
L59731-12	387.20	67.3	40.0	4.1	**6.9**
L59731-13	309.80	79.8	40.0	3.7	**7.4**
L59731-14	263.00	49.5	40.0	1.5	**1.9**
L59731-15	320.50	88.7	40.0	4.1	**9.1**
L59731-16	424.10	84.6	40.0	4.4	**9.2**
L59731-17	480.40	62.8	40.0	1.5	**2.4**
L59731-18	228.40	76.1	40.0	3.3	**6.2**
L59731-19	296.80	89.1	40.0	3.1	**6.9**
L59731-20	325.70	84.7	40.0	2.7	**5.8**
dup L59731-01	236.40	75.6	40.0	4.2	**8.0**

(wt of sxs between 105um & 53um) / (wt. of sxs used for texture) = VFS of texture

(VFS of Texture) x (% <2000um) = % VFS

additional data from:

-sieve2000 WG216879

-sieve53 WG217297

-texture WG217118

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

December 21, 2006

Report to:
Clay Wisdom
Carbon Resources
PO Box 1789
Albuquerque, NM 87192

Bill to:
Clay Wisdom
Carbon Resources
PO Box 11789
Albuquerque, NM 87192

cc: Greg Hunt, Bruce Chesler

Project ID:
ACZ Project ID: L59732

Clay Wisdom:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 31, 2006. This project has been assigned to ACZ's project number, L59732. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L59732. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after January 21, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

If you have any questions or other needs, please contact your Project Manager.

Sue Webber 21/Dec/06

Sue Webber, Project Manager, has reviewed and approved this report in its entirety.

Accredited in accordance with nelac

ACIL

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Case Narrative

Carbon Resources

December 21, 2006

Project ID:
ACZ Project ID: L59732

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 19 soil samples from Carbon Resources on October 31, 2006. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L59732. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were not performed within EPA recommended holding times. The EPA holding times apply to water samples, not soil so the "H" flags are not applicable.

Sample Analysis

These samples were analyzed for inorganic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The following anomalies required further explanation not provided by the Extended Qualifier Report:

1. For Nitrate/Nitrite, extractable values flagged with an "N1", the Prep Blank (PBS) was detected above the MDL. The data was flagged and accepted since this is considered typical procedural contamination.

2. For Phosphorus, extractable values flagged with an "N1", the Prep Blank (PBS) was detected above the MDL. The data was flagged and accepted since this is considered typical procedural contamination.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-5 40-60"

ACZ Sample ID: ***L59732-01***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/16/06 18:52	pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.33		*	meq/L	0.01	0.05	11/29/06 20:24	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.31		*	meq/L	0.02	0.08	11/29/06 20:24	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	80		*	mg/Kg	20	50	12/04/06 14:12	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.076		*	meq/L	0.008	0.03	11/29/06 20:24	msh
Sodium Absorption Ratio	Calculation	0.33				0.03	0.15	12/21/06 10:11	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.30		*	meq/L	0.01	0.04	11/29/06 20:24	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.6		*	%	0.1	0.5	11/21/06 12:12	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.249		*	mmhos/cm	0.001	0.01	11/22/06 14:00	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	3.3		*	%	0.1	0.5	12/07/06 12:28	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.7		*	units	0.1	0.1	11/22/06 14:00	srs
Saturation Percent	USDA No. 60 (2)	52.30		*	%	0.01	0.1	11/22/06 14:00	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	86.9		*	% Passing	0.1	0.5	12/08/06 8:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	84.4		*	% Passing	0.1	0.5	11/22/06 10:00	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	91.6		*	%	0.1	0.5	11/28/06 13:03	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		21.3		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		37.5		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		41.3		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		SiL		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-5 40-60"

ACZ Sample ID: ***L59732-01***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 11:12	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:31	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 17:06	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 19:00	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 12:44	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	7.9			mg/Kg	0.2	1	12/21/06 10:11	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	8.6	H	*	mg/Kg	0.2	1	11/30/06 21:43	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	11/30/06 21:43	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.088	H	*	%	0.005	0.02	12/18/06 15:16	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	18	H	*	mg/Kg	1	5	11/30/06 19:50	pjb

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-6 0-7"

ACZ Sample ID: ***L59732-02***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/16/06 21:33	pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	2.48		*	meq/L	0.01	0.05	11/29/06 20:32	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.38		*	meq/L	0.02	0.08	11/29/06 20:32	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	240		*	mg/Kg	20	50	12/04/06 14:18	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.451		*	meq/L	0.008	0.03	11/29/06 20:32	msh
Sodium Absorption Ratio	Calculation	0.11	B			0.03	0.15	12/21/06 10:12	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.14		*	meq/L	0.01	0.04	11/29/06 20:32	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.6		*	%	0.1	0.5	11/21/06 12:36	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.275		*	mmhos/cm	0.001	0.01	11/22/06 19:03	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	3.7		*	%	0.1	0.5	12/07/06 12:42	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.5		*	units	0.1	0.1	11/22/06 19:03	srs
Saturation Percent	USDA No. 60 (2)	52.10		*	%	0.01	0.1	11/22/06 19:03	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	87.7		*	% Passing	0.1	0.5	12/08/06 8:30	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	87.6		*	% Passing	0.1	0.5	11/22/06 10:23	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	87.9		*	%	0.1	0.5	11/28/06 14:07	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		22.5		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		30.0		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		47.5		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		SiL		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-6 0-7"

ACZ Sample ID: ***L59732-02***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 11:36	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:33	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 17:18	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 19:12	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 12:58	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	9.0			mg/Kg	0.2	1	12/21/06 10:12	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	9.8	H	*	mg/Kg	0.2	1	11/30/06 21:46	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/30/06 21:46	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.093	H	*	%	0.008	0.04	12/18/06 15:18	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	15	H	*	mg/Kg	1	5	11/30/06 19:52	pjb

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-6 24-48"

ACZ Sample ID: ***L59732-03***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/17/06 0:14	pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	3.21		*	meq/L	0.01	0.05	11/29/06 20:36	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.76		*	meq/L	0.02	0.08	11/29/06 20:36	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	70		*	mg/Kg	20	50	12/04/06 14:39	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.094		*	meq/L	0.008	0.03	11/29/06 20:36	msh
Sodium Absorption Ratio	Calculation	0.21				0.03	0.15	12/21/06 10:12	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.30		*	meq/L	0.01	0.04	11/29/06 20:36	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.3		*	%	0.1	0.5	11/21/06 12:48	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.451		*	mmhos/cm	0.001	0.01	11/22/06 21:34	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	3.2		*	%	0.1	0.5	12/07/06 12:57	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.5		*	units	0.1	0.1	11/22/06 21:34	srs
Saturation Percent	USDA No. 60 (2)	54.40		*	%	0.01	0.1	11/22/06 21:34	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	88.7		*	% Passing	0.1	0.5	12/08/06 9:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	72.4		*	% Passing	0.1	0.5	11/22/06 10:46	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	94.7		*	%	0.1	0.5	11/28/06 15:11	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		20.0		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		40.0		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		40.0		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		SiL/L		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-6 24-48"

ACZ Sample ID: ***L59732-03***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 11:48	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:34	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 17:24	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 19:18	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 13:12	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	3.3			mg/Kg	0.2	1	12/21/06 10:12	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.1	H	*	mg/Kg	0.2	1	11/30/06 21:48	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/30/06 21:48	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.067	H	*	%	0.003	0.02	12/18/06 15:20	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	12	H	*	mg/Kg	1	5	11/30/06 19:55	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-6 48-72"

ACZ Sample ID: ***L59732-04***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/17/06 1:34	pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	2.96		*	meq/L	0.01	0.05	11/29/06 20:40	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.69		*	meq/L	0.02	0.08	11/29/06 20:40	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	100		*	mg/Kg	20	50	12/04/06 14:43	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.086		*	meq/L	0.008	0.03	11/29/06 20:40	msh
Sodium Absorption Ratio	Calculation	0.20				0.03	0.15	12/21/06 10:12	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.28		*	meq/L	0.01	0.04	11/29/06 20:40	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.4		*	%	0.1	0.5	11/21/06 13:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.452		*	mmhos/cm	0.001	0.01	11/23/06 0:06	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	3.3		*	%	0.1	0.5	12/07/06 13:11	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.4		*	units	0.1	0.1	11/23/06 0:06	srs
Saturation Percent	USDA No. 60 (2)	51.00		*	%	0.01	0.1	11/23/06 0:06	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	91.1		*	% Passing	0.1	0.5	12/08/06 9:30	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	61.4		*	% Passing	0.1	0.5	11/22/06 11:10	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	93.0		*	%	0.1	0.5	11/28/06 16:15	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		20.0		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		37.5		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		42.5		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		SiL		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-6 48-72"

ACZ Sample ID: ***L59732-04***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 12:00	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:36	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 17:30	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 19:25	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 13:26	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	2.3			mg/Kg	0.2	1	12/21/06 10:12	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	3.1	H	*	mg/Kg	0.2	1	11/30/06 21:49	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/30/06 21:49	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.083	H	*	%	0.003	0.02	12/18/06 15:21	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	10	H	*	mg/Kg	1	5	11/30/06 19:56	pjb

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-7 0-6"

ACZ Sample ID: ***L59732-05***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/17/06 2:55	pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	4.92		*	meq/L	0.01	0.05	11/29/06 20:44	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.72		*	meq/L	0.02	0.08	11/29/06 20:44	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	250		*	mg/Kg	20	50	12/04/06 14:46	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.672		*	meq/L	0.008	0.03	11/29/06 20:44	msh
Sodium Absorption Ratio	Calculation	0.09	B			0.03	0.15	12/21/06 10:12	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.16		*	meq/L	0.01	0.04	11/29/06 20:44	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.3		*	%	0.1	0.5	11/21/06 13:12	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.689		*	mmhos/cm	0.001	0.01	11/23/06 2:37	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	2.7		*	%	0.1	0.5	12/07/06 13:25	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.2		*	units	0.1	0.1	11/23/06 2:37	srs
Saturation Percent	USDA No. 60 (2)	49.60		*	%	0.01	0.1	11/23/06 2:37	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	90.3		*	% Passing	0.1	0.5	12/08/06 10:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	68.2		*	% Passing	0.1	0.5	11/22/06 11:33	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	85.8		*	%	0.1	0.5	11/28/06 17:18	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		20.0		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		30.0		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		50.0		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		SiL		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-7 0-6"

ACZ Sample ID: ***L59732-05***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 12:12	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:38	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 17:36	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 19:31	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 13:41	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.9			mg/Kg	0.2	1	12/21/06 10:12	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.9	H	*	mg/Kg	0.2	1	11/30/06 21:51	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	11/30/06 21:51	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.088	H	*	%	0.005	0.02	12/18/06 15:22	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	7	H	*	mg/Kg	1	5	11/30/06 19:57	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-7 6-20"

ACZ Sample ID: ***L59732-06***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/17/06 4:15	pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	2.98		*	meq/L	0.01	0.05	11/29/06 20:48	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.56		*	meq/L	0.02	0.08	11/29/06 20:48	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	130		*	mg/Kg	20	50	12/04/06 14:50	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.149		*	meq/L	0.008	0.03	11/29/06 20:48	msh
Sodium Absorption Ratio	Calculation	0.12	B			0.03	0.15	12/21/06 10:12	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.17		*	meq/L	0.01	0.04	11/29/06 20:48	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.1		*	%	0.1	0.5	11/21/06 13:24	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.462		*	mmhos/cm	0.001	0.01	11/23/06 5:09	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	3.3		*	%	0.1	0.5	12/07/06 13:39	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.5		*	units	0.1	0.1	11/23/06 5:09	srs
Saturation Percent	USDA No. 60 (2)	47.30		*	%	0.01	0.1	11/23/06 5:09	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	92.9		*	% Passing	0.1	0.5	12/08/06 10:30	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	53.9		*	% Passing	0.1	0.5	11/22/06 11:56	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	87.4		*	%	0.1	0.5	11/28/06 18:22	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		22.5		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		30.0		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		47.5		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		SiL		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-7 6-20"

ACZ Sample ID: ***L59732-06***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 12:24	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:39	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 17:42	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 19:37	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 13:55	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.4	B		mg/Kg	0.2	1	12/21/06 10:12	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.2	H	*	mg/Kg	0.2	1	11/30/06 21:52	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/30/06 21:52	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.057	H	*	%	0.003	0.01	12/18/06 15:24	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	10	H	*	mg/Kg	1	5	11/30/06 19:58	pjb

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-7 20-42"

ACZ Sample ID: ***L59732-07***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/17/06 8:17	pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.93		*	meq/L	0.01	0.05	11/29/06 21:00	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.32		*	meq/L	0.02	0.08	11/29/06 21:00	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	90		*	mg/Kg	20	50	12/04/06 14:53	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.128		*	meq/L	0.008	0.03	11/29/06 21:00	msh
Sodium Absorption Ratio	Calculation	0.12	B			0.03	0.15	12/21/06 10:13	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.10		*	meq/L	0.01	0.04	11/29/06 21:00	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.9		*	%	0.1	0.5	11/21/06 13:36	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.203		*	mmhos/cm	0.001	0.01	11/23/06 7:41	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	3.3		*	%	0.1	0.5	12/07/06 13:54	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.8		*	units	0.1	0.1	11/23/06 7:41	srs
Saturation Percent	USDA No. 60 (2)	43.30		*	%	0.01	0.1	11/23/06 7:41	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	91.5		*	% Passing	0.1	0.5	12/08/06 11:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	67.7		*	% Passing	0.1	0.5	11/22/06 12:20	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	92.5		*	%	0.1	0.5	11/28/06 19:26	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		21.3		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		32.5		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		46.3		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		SiL		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-7 20-42"

ACZ Sample ID: ***L59732-07***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 12:36	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:41	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 17:48	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 19:44	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 14:09	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.5	B		mg/Kg	0.2	1	12/21/06 10:13	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.2	H	*	mg/Kg	0.2	1	11/30/06 21:57	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	11/30/06 21:57	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.045	H	*	%	0.003	0.02	12/18/06 15:25	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	8	H	*	mg/Kg	1	5	11/30/06 19:59	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-7 42-58"

ACZ Sample ID: ***L59732-08***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/17/06 9:38	pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.63		*	meq/L	0.01	0.05	11/29/06 21:04	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.42		*	meq/L	0.02	0.08	11/29/06 21:04	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	110		*	mg/Kg	20	50	12/04/06 14:56	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.086		*	meq/L	0.008	0.03	11/29/06 21:04	msh
Sodium Absorption Ratio	Calculation	0.22				0.03	0.15	12/21/06 10:13	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.23		*	meq/L	0.01	0.04	11/29/06 21:04	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.2		*	%	0.1	0.5	11/21/06 13:48	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.301		*	mmhos/cm	0.001	0.01	11/23/06 10:12	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	2.8		*	%	0.1	0.5	12/07/06 14:08	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.6		*	units	0.1	0.1	11/23/06 10:12	srs
Saturation Percent	USDA No. 60 (2)	54.30		*	%	0.01	0.1	11/23/06 10:12	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	90.9		*	% Passing	0.1	0.5	12/08/06 11:30	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	70.3		*	% Passing	0.1	0.5	11/22/06 12:43	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	93.0		*	%	0.1	0.5	11/28/06 20:30	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		22.5		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		32.5		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		45.0		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		Si/C/L		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-7 42-58"

ACZ Sample ID: ***L59732-08***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 12:48	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:42	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 17:54	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 19:50	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 14:23	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2		U		mg/Kg	0.2	1	12/21/06 10:13	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.9	BH	*	mg/Kg	0.2	1	11/30/06 21:58	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/30/06 21:58	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.068	H	*	%	0.003	0.02	12/18/06 15:26	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	8	H	*	mg/Kg	1	5	11/30/06 20:02	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-7 58-70"

ACZ Sample ID: ***L59732-09***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/17/06 10:58	pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	3.35		*	meq/L	0.01	0.05	11/29/06 21:08	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.83		*	meq/L	0.02	0.08	11/29/06 21:08	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	140		*	mg/Kg	20	50	12/04/06 15:00	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.106		*	meq/L	0.008	0.03	11/29/06 21:08	msh
Sodium Absorption Ratio	Calculation	0.13	B			0.03	0.15	12/21/06 10:13	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.20		*	meq/L	0.01	0.04	11/29/06 21:08	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.8		*	%	0.1	0.5	11/21/06 14:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.477		*	mmhos/cm	0.001	0.01	11/23/06 12:44	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.8		*	%	0.1	0.5	12/07/06 14:22	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.2		*	units	0.1	0.1	11/23/06 12:44	srs
Saturation Percent	USDA No. 60 (2)	36.50		*	%	0.01	0.1	11/23/06 12:44	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	76.4		*	% Passing	0.1	0.5	12/08/06 12:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	94.6		*	% Passing	0.1	0.5	11/22/06 13:06	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	95.7		*	%	0.1	0.5	11/28/06 21:33	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		12.5		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		52.5		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		35.0		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		L		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-7 58-70"

ACZ Sample ID: ***L59732-09***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 13:00	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:44	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 18:00	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 19:56	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 14:38	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2		U		mg/Kg	0.2	1	12/21/06 10:13	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	BH	*	mg/Kg	0.2	1	11/30/06 21:59	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/30/06 21:59	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.065	H	*	%	0.004	0.02	12/18/06 15:29	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	16	H	*	mg/Kg	1	5	11/30/06 20:04	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-8 0-6"

ACZ Sample ID: ***L59732-10***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/17/06 12:19	pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	3.91		*	meq/L	0.01	0.05	11/29/06 21:12	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.79		*	meq/L	0.02	0.08	11/29/06 21:12	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	360		*	mg/Kg	20	50	12/04/06 15:03	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	1.110		*	meq/L	0.008	0.03	11/29/06 21:12	msh
Sodium Absorption Ratio	Calculation	0.08	B			0.03	0.15	12/21/06 10:13	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.13		*	meq/L	0.01	0.04	11/29/06 21:12	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	2.5		*	%	0.1	0.5	11/21/06 14:12	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.587		*	mmhos/cm	0.001	0.01	11/23/06 15:15	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.2		*	%	0.1	0.5	12/07/06 14:37	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.0		*	units	0.1	0.1	11/23/06 15:15	srs
Saturation Percent	USDA No. 60 (2)	64.60		*	%	0.01	0.1	11/23/06 15:15	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	79.7		*	% Passing	0.1	0.5	12/08/06 12:30	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	92.1		*	% Passing	0.1	0.5	11/22/06 13:30	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	80.4		*	%	0.1	0.5	11/28/06 22:37	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		8.8		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		52.5		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		38.8		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		L		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-8 0-6"

ACZ Sample ID: ***L59732-10***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 13:12	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:45	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 18:06	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 20:03	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 14:52	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	2.1			mg/Kg	0.2	1	12/21/06 10:13	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	2.1	H	*	mg/Kg	0.2	1	11/30/06 22:00	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	11/30/06 22:00	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.22	H	*	%	0.01	0.06	12/18/06 15:30	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	25	H	*	mg/Kg	1	5	11/30/06 20:19	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-8 6-13"

ACZ Sample ID: ***L59732-11***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/06/06 18:39	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.13		*	meq/L	0.01	0.05	11/29/06 21:16	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.28		*	meq/L	0.02	0.08	11/29/06 21:16	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	280		*	mg/Kg	20	50	12/04/06 15:07	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.420		*	meq/L	0.008	0.03	11/29/06 21:16	msh
Sodium Absorption Ratio	Calculation	0.14	B			0.03	0.15	12/21/06 10:13	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.12		*	meq/L	0.01	0.04	11/29/06 21:16	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.1		*	%	0.1	0.5	11/21/06 14:24	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.275		*	mmhos/cm	0.001	0.01	11/23/06 17:47	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.8		*	%	0.1	0.5	12/07/06 14:51	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.1		*	units	0.1	0.1	11/23/06 17:47	srs
Saturation Percent	USDA No. 60 (2)	41.50		*	%	0.01	0.1	11/23/06 17:47	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	78.9		*	% Passing	0.1	0.5	12/08/06 13:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	90.5		*	% Passing	0.1	0.5	11/22/06 13:53	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	84.9		*	%	0.1	0.5	11/28/06 23:41	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		10.0		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		55.0		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		35.0		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		L		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-8 6-13"

ACZ Sample ID: ***L59732-11***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 13:24	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:47	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 18:12	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 20:09	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 15:06	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.7			mg/Kg	0.2	1	12/21/06 10:13	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.7	H	*	mg/Kg	0.2	1	11/30/06 22:02	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	11/30/06 22:02	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.153	H	*	%	0.004	0.02	12/08/06 18:21	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	20	H	*	mg/Kg	1	5	11/30/06 20:06	pjb

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-8 13-20"

ACZ Sample ID: ***L59732-12***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/06/06 19:38	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.56		*	meq/L	0.01	0.05	11/29/06 21:20	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.23		*	meq/L	0.02	0.08	11/29/06 21:20	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	190		*	mg/Kg	20	50	12/04/06 15:10	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.235		*	meq/L	0.008	0.03	11/29/06 21:20	msh
Sodium Absorption Ratio	Calculation	0.17				0.03	0.15	12/21/06 10:14	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.11		*	meq/L	0.01	0.04	11/29/06 21:20	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.4	B	*	%	0.1	0.5	11/21/06 14:36	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.164		*	mmhos/cm	0.001	0.01	11/23/06 20:19	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.6		*	%	0.1	0.5	12/07/06 15:05	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.0		*	units	0.1	0.1	11/23/06 20:19	srs
Saturation Percent	USDA No. 60 (2)	38.80		*	%	0.01	0.1	11/23/06 20:19	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	75.8		*	% Passing	0.1	0.5	12/08/06 13:30	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	96.9		*	% Passing	0.1	0.5	11/22/06 14:16	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	96.5		*	%	0.1	0.5	11/29/06 0:45	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		12.5		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		55.0		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		32.5		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		L		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-8 13-20"

ACZ Sample ID: ***L59732-12***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 13:36	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:49	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 18:18	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 20:15	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 15:20	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.8	B		mg/Kg	0.2	1	12/21/06 10:14	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	BH	*	mg/Kg	0.2	1	11/30/06 22:03	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	11/30/06 22:03	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.054	H	*	%	0.006	0.03	12/08/06 18:25	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	20	H	*	mg/Kg	1	5	11/30/06 20:07	pjb

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-8 20-48"

ACZ Sample ID: ***L59732-13***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/06/06 20:38	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.60		*	meq/L	0.01	0.05	11/29/06 21:24	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.30		*	meq/L	0.02	0.08	11/29/06 21:24	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	200		*	mg/Kg	20	50	12/04/06 15:21	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.220		*	meq/L	0.008	0.03	11/29/06 21:24	msh
Sodium Absorption Ratio	Calculation	0.17				0.03	0.15	12/21/06 10:14	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.12		*	meq/L	0.01	0.04	11/29/06 21:24	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.3	B	*	%	0.1	0.5	11/21/06 14:48	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.184		*	mmhos/cm	0.001	0.01	11/23/06 22:50	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.6		*	%	0.1	0.5	12/07/06 15:19	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.3		*	units	0.1	0.1	11/23/06 22:50	srs
Saturation Percent	USDA No. 60 (2)	38.00		*	%	0.01	0.1	11/23/06 22:50	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	76.1		*	% Passing	0.1	0.5	12/08/06 14:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	92.6		*	% Passing	0.1	0.5	11/22/06 14:40	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	95.7		*	%	0.1	0.5	11/29/06 1:48	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		16.3		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		53.8		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		30.0		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		L		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-8 20-48"

ACZ Sample ID: ***L59732-13***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 13:48	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:50	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 18:24	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 20:22	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 15:34	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2		U		mg/Kg	0.2	1	12/21/06 10:14	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	BH	*	mg/Kg	0.2	1	11/30/06 22:04	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/30/06 22:04	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.029	H	*	%	0.001	0.007	12/08/06 18:02	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	17	H	*	mg/Kg	1	5	11/30/06 20:08	pjb

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 0-6"

ACZ Sample ID: ***L59732-14***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/06/06 21:08	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	3.48		*	meq/L	0.01	0.05	11/29/06 21:28	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.39		*	meq/L	0.02	0.08	11/29/06 21:28	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	170		*	mg/Kg	20	50	12/04/06 15:24	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.199		*	meq/L	0.008	0.03	11/29/06 21:28	msh
Sodium Absorption Ratio	Calculation	0.09	B			0.03	0.15	12/21/06 10:14	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.13		*	meq/L	0.01	0.04	11/29/06 21:28	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	2.0		*	%	0.1	0.5	11/21/06 15:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.445		*	mmhos/cm	0.001	0.01	11/24/06 1:22	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	2.0		*	%	0.1	0.5	12/07/06 15:34	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.5		*	units	0.1	0.1	11/24/06 1:22	srs
Saturation Percent	USDA No. 60 (2)	51.60		*	%	0.01	0.1	11/24/06 1:22	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	85.6		*	% Passing	0.1	0.5	12/08/06 14:30	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	75.6		*	% Passing	0.1	0.5	11/22/06 15:03	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	87.3		*	%	0.1	0.5	11/29/06 2:52	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		16.3		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		47.5		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		36.3		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		L		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 0-6"

ACZ Sample ID: ***L59732-14***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 14:00	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:52	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 18:30	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 20:28	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 15:49	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.0			mg/Kg	0.2	1	12/21/06 10:14	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.8	H	*	mg/Kg	0.2	1	11/30/06 22:05	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/30/06 22:05	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.119	H	*	%	0.005	0.03	12/08/06 18:27	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	11	H	*	mg/Kg	1	5	11/30/06 20:09	pjb

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 6-12"

ACZ Sample ID: ***L59732-15***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/06/06 21:37	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	3.25		*	meq/L	0.01	0.05	11/29/06 21:32	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.54		*	meq/L	0.02	0.08	11/29/06 21:32	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	120		*	mg/Kg	20	50	12/04/06 15:28	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.087		*	meq/L	0.008	0.03	11/29/06 21:32	msh
Sodium Absorption Ratio	Calculation	0.08	B			0.03	0.15	12/21/06 10:14	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.12		*	meq/L	0.01	0.04	11/29/06 21:32	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	2.2		*	%	0.1	0.5	11/21/06 15:12	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.466		*	mmhos/cm	0.001	0.01	11/24/06 3:53	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.9		*	%	0.1	0.5	12/07/06 15:48	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.7		*	units	0.1	0.1	11/24/06 3:53	srs
Saturation Percent	USDA No. 60 (2)	47.60		*	%	0.01	0.1	11/24/06 3:53	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	84.6		*	% Passing	0.1	0.5	12/08/06 15:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	79.3		*	% Passing	0.1	0.5	11/22/06 15:26	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	88.7		*	%	0.1	0.5	11/29/06 3:56	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		17.5		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		50.0		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		32.5		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		L		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 6-12"

ACZ Sample ID: ***L59732-15***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 14:12	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:53	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 18:36	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 20:34	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 16:03	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2		U		mg/Kg	0.2	1	12/21/06 10:14	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.9	BH	*	mg/Kg	0.2	1	11/30/06 22:07	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/30/06 22:07	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.118	H	*	%	0.007	0.03	12/08/06 18:28	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	11	H	*	mg/Kg	1	5	11/30/06 20:11	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 12-30"

ACZ Sample ID: ***L59732-16***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/13/06 16:48	jag/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	2.31		*	mg/Kg	0.05	0.3	11/18/06 5:44	wfg
Calcium, soluble (Sat. Paste)	M6010B ICP	1.33		*	meq/L	0.01	0.05	11/29/06 21:36	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.28		*	meq/L	0.02	0.08	11/29/06 21:36	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	80		*	mg/Kg	20	50	12/04/06 15:31	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.099		*	meq/L	0.008	0.03	11/29/06 21:36	msh
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	11/30/06 13:59	djt
Sodium Absorption Ratio	Calculation	0.10	B			0.03	0.15	12/21/06 10:14	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.09		*	meq/L	0.01	0.04	11/29/06 21:36	msh

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 12-30"

ACZ Sample ID: ***L59732-16***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	15			t CaCO3/Kt	1	5	12/21/06 10:14	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	42			t CaCO3/Kt	1	5	12/21/06 10:14	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	27			t CaCO3/Kt	1	5	12/21/06 10:14	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	29.6		*	%	0.1	0.5	11/21/06 15:24	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.265		*	mmhos/cm	0.001	0.01	11/24/06 6:25	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	4.2		*	%	0.1	0.5	12/07/06 16:02	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.5		*	units	0.1	0.1	11/24/06 6:25	srs
Saturation Percent	USDA No. 60 (2)	37.50		*	%	0.01	0.1	11/24/06 6:25	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	94.4		*	% Passing	0.1	0.5	12/08/06 15:30	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	59.8		*	% Passing	0.1	0.5	11/22/06 15:50	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	90.9		*	%	0.1	0.5	11/29/06 5:00	lwt/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.18		*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Pyritic Sulfide		0.07	B	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Sulfate		0.23		*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Total		0.48		*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.25		*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		12.5		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		68.8		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		18.8		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		SL		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 12-30"

ACZ Sample ID: ***L59732-16***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 14:24	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:55	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/17/06 11:15	srs/aep
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 18:42	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 20:41	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 16:17	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.7	B		mg/Kg	0.2	1	12/21/06 10:14	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	BH	*	mg/Kg	0.2	1	11/30/06 22:08	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	11/30/06 22:08	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	1.1	H	*	%	0.1	0.5	12/14/06 15:21	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	3	BH	*	mg/Kg	1	5	11/30/06 20:12	pjb

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 30-68"

ACZ Sample ID: ***L59732-17***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/13/06 17:23	jag/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	2.16		*	mg/Kg	0.05	0.3	11/18/06 5:48	wfg
Calcium, soluble (Sat. Paste)	M6010B ICP	20.90		*	meq/L	0.01	0.05	11/29/06 21:48	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	11.00		*	meq/L	0.02	0.08	11/29/06 21:48	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	100		*	mg/Kg	20	50	12/04/06 15:34	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.159		*	meq/L	0.008	0.03	11/29/06 21:48	msh
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	11/30/06 14:03	djt
Sodium Absorption Ratio	Calculation	0.03	B			0.03	0.15	12/21/06 10:14	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.12		*	meq/L	0.01	0.04	11/29/06 21:48	msh

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 30-68"

ACZ Sample ID: ***L59732-17***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	19			t CaCO3/Kt	1	5	12/21/06 10:14	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	54			t CaCO3/Kt	1	5	12/21/06 10:14	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	35			t CaCO3/Kt	1	5	12/21/06 10:14	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	24.4		*	%	0.1	0.5	11/21/06 15:36	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	2.110		*	mmhos/cm	0.001	0.01	11/24/06 8:56	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	5.4		*	%	0.1	0.5	12/07/06 16:17	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.1		*	units	0.1	0.1	11/24/06 8:56	srs
Saturation Percent	USDA No. 60 (2)	55.20		*	%	0.01	0.1	11/24/06 8:56	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	97.4		*	% Passing	0.1	0.5	12/08/06 16:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	51.7		*	% Passing	0.1	0.5	11/22/06 16:13	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	89.4		*	%	0.1	0.5	11/29/06 6:03	lwt/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.23		*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Pyritic Sulfide			U	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Sulfate		0.43		*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Total		0.62		*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.19		*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		17.5		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		57.5		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		25.0		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		L		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 30-68"

ACZ Sample ID: ***L59732-17***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 14:36	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:57	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/17/06 11:30	srs/aep
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 18:48	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 20:47	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 16:31	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.8	B		mg/Kg	0.2	1	12/21/06 10:14	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	BH	*	mg/Kg	0.2	1	11/30/06 22:13	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	11/30/06 22:13	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.49	H	*	%	0.02	0.08	12/14/06 15:23	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	2	BH	*	mg/Kg	1	5	11/30/06 20:16	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 80-95"

ACZ Sample ID: ***L59732-18***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/06/06 22:07	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	0.91		*	mg/Kg	0.05	0.3	11/18/06 6:01	wfg
Calcium, soluble (Sat. Paste)	M6010B ICP	2.34		*	meq/L	0.01	0.05	11/29/06 21:52	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.29		*	meq/L	0.02	0.08	11/29/06 21:52	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	120		*	mg/Kg	20	50	12/04/06 15:38	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.149		*	meq/L	0.008	0.03	11/29/06 21:52	msh
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	11/30/06 14:07	djt
Sodium Absorption Ratio	Calculation	0.07	B			0.03	0.15	12/21/06 10:15	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.09		*	meq/L	0.01	0.04	11/29/06 21:52	msh

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 80-95"

ACZ Sample ID: ***L59732-18***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	2			t CaCO3/Kt	1	5	12/21/06 10:15	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	17			t CaCO3/Kt	1	5	12/21/06 10:15	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	15			t CaCO3/Kt	1	5	12/21/06 10:15	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	4.3		*	%	0.1	0.5	11/21/06 15:48	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.346		*	mmhos/cm	0.001	0.01	11/24/06 11:28	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.7		*	%	0.1	0.5	12/07/06 16:31	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.5		*	units	0.1	0.1	11/24/06 11:28	srs
Saturation Percent	USDA No. 60 (2)	49.00		*	%	0.01	0.1	11/24/06 11:28	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	85.5		*	% Passing	0.1	0.5	12/08/06 16:30	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	80.3		*	% Passing	0.1	0.5	11/22/06 16:36	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	90.6		*	%	0.1	0.5	11/29/06 7:07	lwt/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.03	B	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Pyritic Sulfide			U	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Sulfate		0.03	B	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Total		0.06	B	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.03	B	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		15.0		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		53.8		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		31.3		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		L		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 80-95"

ACZ Sample ID: ***L59732-18***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 14:48	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:58	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/17/06 11:45	srs/aep
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 18:54	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 20:53	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 16:46	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.6	B		mg/Kg	0.2	1	12/21/06 10:15	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.4	H	*	mg/Kg	0.2	1	11/30/06 22:14	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	11/30/06 22:14	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.180	H	*	%	0.007	0.04	12/08/06 18:30	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	9	H	*	mg/Kg	1	5	11/30/06 20:17	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 95-115"

ACZ Sample ID: ***L59732-20***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/06/06 23:36	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	0.86		*	mg/Kg	0.05	0.3	11/18/06 6:05	wfg
Calcium, soluble (Sat. Paste)	M6010B ICP	1.35		*	meq/L	0.01	0.05	11/29/06 21:56	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.29		*	meq/L	0.02	0.08	11/29/06 21:56	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	150		*	mg/Kg	20	50	12/04/06 15:41	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.051		*	meq/L	0.008	0.03	11/29/06 21:56	msh
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	11/30/06 14:10	djt
Sodium Absorption Ratio	Calculation	0.24				0.03	0.15	12/21/06 10:15	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.22		*	meq/L	0.01	0.04	11/29/06 21:56	msh

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 95-115"

ACZ Sample ID: ***L59732-20***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	1			t CaCO3/Kt	1	5	12/21/06 10:15	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	13			t CaCO3/Kt	1	5	12/21/06 10:15	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	12			t CaCO3/Kt	1	5	12/21/06 10:15	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	2.4		*	%	0.1	0.5	11/21/06 16:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.254		*	mmhos/cm	0.001	0.01	11/24/06 14:00	srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.3		*	%	0.1	0.5	12/07/06 16:45	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.7		*	units	0.1	0.1	11/24/06 14:00	srs
Saturation Percent	USDA No. 60 (2)	51.00		*	%	0.01	0.1	11/24/06 14:00	srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	84.5		*	% Passing	0.1	0.5	12/08/06 17:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	74.4		*	% Passing	0.1	0.5	11/22/06 17:00	as/srs
Solids, Percent	CLPSOW390, PART F, D-98	89.7		*	%	0.1	0.5	11/29/06 8:11	lwt/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.02	B	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Pyritic Sulfide			U	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Sulfate		0.02	B	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Sulfur Total		0.04	B	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.02	B	*	%	0.01	0.1	11/25/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		15.0		*	%	0.1	0.5	12/07/06 0:00	brg
Sand		55.0		*	%	0.1	0.5	12/07/06 0:00	brg
Silt		30.0		*	%	0.1	0.5	12/07/06 0:00	brg
Texture Classification		L		*				12/07/06 0:00	brg
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 95-115"

ACZ Sample ID: ***L59732-20***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/27/06 15:00	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 10:00	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/17/06 12:00	srs/aep
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/27/06 19:00	jjr
Saturated Paste Extraction	USDA No. 60 (2)							11/20/06 21:00	srs/erf
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/13/06 17:00	as/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.3			mg/Kg	0.2	1	12/21/06 10:15	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.9	H	*	mg/Kg	0.2	1	11/30/06 22:15	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.6	H	*	mg/Kg	0.1	0.5	11/30/06 22:15	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.39	H	*	%	0.01	0.05	12/08/06 18:06	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	11	H	*	mg/Kg	1	5	11/30/06 20:18	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Reference

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calivation Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

Carbon Resources

ACZ Project ID: ***L59732***

Project ID:

Boron, soluble (Hot Water) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216774													
WG216774ICV	ICV	11/18/06 4:16	II061113-6	2		1.938	mg/L	96.9	90	110			
WG216774ICB	ICB	11/18/06 4:20				U	mg/L		-0.03	0.03			
L59459-01DUP	DUP	11/18/06 4:44			.4	.4	mg/L				0	20	
WG216738PBS	PBS	11/18/06 4:48				U	mg/L		-0.15	0.15			
L59731-09DUP	DUP	11/18/06 4:56			.57	.72	mg/L				23.3	20	RC
L59731-10AS	AS	11/18/06 5:16	II061116-2	2.5	.66	3.185	mg/L	101	75	125			
L59731-10ASD	ASD	11/18/06 5:20	II061116-2	2.5	.66	3.202	mg/L	101.7	75	125	0.53	20	

Calcium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217319													
WG217319ICV	ICV	11/29/06 20:05	II061128-2	100		98.76	mg/L	98.8	90	110			
WG217319ICB	ICB	11/29/06 20:09				U	mg/L		-0.6	0.6			
L59732-01DUP	DUP	11/29/06 20:28			1.33	1.853	meq/L				32.8	20	RC

Carbon, total organic (TOC) ASA No.9 29-2.2.4 Combustion/IR

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216966													
WG216966PBS	PBS	11/21/06 12:00				U	%		-0.3	0.3			
L59732-01DUP	DUP	11/21/06 12:24			1.6	1.6	%				0	20	

Conductivity @25C M120.1 - Meter, w/ Saturated Paste Prep

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217046													
L59732-01DUP	DUP	11/22/06 16:31			.249	.347	mmhos/cm				32.9	20	RA TB

Magnesium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217319													
WG217319ICV	ICV	11/29/06 20:05	II061128-2	100		96.21	mg/L	96.2	90	110			
WG217319ICB	ICB	11/29/06 20:09				U	mg/L		-0.6	0.6			
L59732-01DUP	DUP	11/29/06 20:28			.31	.442	meq/L				35.1	20	RC

Neutralization Potential as CaCO3 M600/2-78-054 3.2.3

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217777													
WG217777LCSS	LCSS	12/07/06 12:14	PCN20880	100		102.96	%						
L59732-20DUP	DUP	12/07/06 16:59			1.3	1.3	%				0	20	

Carbon Resources

ACZ Project ID: ***L59732***

Project ID:

Nitrate/Nitrite as N, extractable (KCL) M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217443													
WG217443ICV	ICV	11/30/06 20:53	WI060906-3	2.416		2.399	mg/L	99.3	90	110			
WG217443ICB	ICB	11/30/06 20:54				U	mg/L		-0.06	0.06			
WG217444													
WG217444ICV	ICV	11/30/06 21:38	WI060906-3	2.416		2.261	mg/L	93.6	90	110			
WG217444ICB	ICB	11/30/06 21:39				U	mg/L		-0.06	0.06			
WG217444LFB	LFB	11/30/06 21:41	WI060906-4	2		1.937	mg/Kg	96.9	85	115			
WG217125PBS	PBS	11/30/06 21:42				1.27	mg/Kg		-0.6	0.6			N1
L59732-01DUP	DUP	11/30/06 21:44			8.6	8.5	mg/Kg				1.2	20	
L59732-02AS	AS	11/30/06 21:47	WI060906-4	20	9.8	28.23	mg/Kg	92.2	75	125			

Nitrite as N, extractable (KCL) M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217443													
WG217443ICV	ICV	11/30/06 20:53	WI060906-3	.609		.661	mg/L	108.5	90	110			
WG217443ICB	ICB	11/30/06 20:54				U	mg/L		-0.03	0.03			
WG217444													
WG217444ICV	ICV	11/30/06 21:38	WI060906-3	.609		.652	mg/L	107.1	90	110			
WG217444ICB	ICB	11/30/06 21:39				U	mg/L		-0.03	0.03			
WG217444LFB	LFB	11/30/06 21:41	WI060906-4	1		1.003	mg/Kg	100.3	85	115			
WG217125PBS	PBS	11/30/06 21:42				U	mg/Kg		-0.3	0.3			
L59732-01DUP	DUP	11/30/06 21:44			.7	.72	mg/Kg				2.8	20	RA
L59732-02AS	AS	11/30/06 21:47	WI060906-4	10	.8	10.25	mg/Kg	94.5	75	125			

Carbon Resources

ACZ Project ID: ***L59732***

Project ID:

Nitrogen, total Kjeldahl M351.2 - TKN by Block Digester

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217861													
WG217691ICV	ICV	12/08/06 17:01	WI061129-2	4		3.92	mg/L	98	90	110			
WG217691ICB	ICB	12/08/06 17:02				U	mg/L		-0.3	0.3			
WG217691PBS2	PBS	12/08/06 17:36				U	%		-0.003	0.003			
WG217691LFB2	LFB	12/08/06 17:37	WI061129-6	2.5		2.47	%	98.8	85	115			
L59735-14MS	MS	12/08/06 17:39	WI061129-6	.0325	.019	.0476	%	88	75	125			
WG217691PBS1	PBS	12/08/06 17:53				U	%		-0.003	0.003			
WG217691LFB1	LFB	12/08/06 17:54	WI061129-6	2.5		2.54	%	101.6	85	115			
L59735-15DUP	DUP	12/08/06 18:14			.19	.232	%				19.9	20	
L59732-11DUP	DUP	12/08/06 18:24			.153	.1393	%				9.4	20	
L59732-12MS	MS	12/08/06 18:26	5XPTSTKN	.0345	.054	.095	%	118.8	75	125			
WG218152													
WG218152ICV1	ICV	12/14/06 15:10	WI061129-2	4		3.93	mg/L	98.3	90	110			
WG218073ICB	ICB	12/14/06 15:12				U	mg/L		-0.3	0.3			
WG218073PBS	PBS	12/14/06 15:19				U	%		-0.006	0.006			
WG218073LFB	LFB	12/14/06 15:20	WI061129-6	2.5		2.66	%	106.4	85	115			
L60028-01MS	MS	12/14/06 15:27	100XTKN	.0535	6	5.94	%	-112.1	75	125			M3
L60098-01DUP	DUP	12/14/06 15:29			6.7	6.97	%				4	20	
WG218282													
WG218275ICV	ICV	12/18/06 11:56	WI061129-2	4		3.9	mg/L	97.5	90	110			
WG218275ICB	ICB	12/18/06 11:57				U	mg/L		-0.3	0.3			
WG218283													
WG218274PBS	PBS	12/18/06 13:45				U	%		-0.0024	0.0024			
WG218274LFB	LFB	12/18/06 13:46	WI061129-6	2.5		2.36	%	94.4	85	115			
WG218274ICV	ICV	12/18/06 15:14	WI061129-2	4		3.82	mg/L	95.5	90	110			
WG218274ICB	ICB	12/18/06 15:15				U	mg/L		-0.3	0.3			
L59732-01MS	MS	12/18/06 15:17	5XPTSTKN	.0235	.088	.116	%	119.1	75	125			
L59732-02DUP	DUP	12/18/06 15:19			.093	.1318	%				34.5	20	RD

Percent Clay ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217417													
L59732-01DUP	DUP	12/07/06 9:24			21.3	21.3	%				0	20	

Percent Sand ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217417													
L59732-01DUP	DUP	12/07/06 9:24			37.5	37.5	%				0	20	

Percent Silt ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217417													
L59732-01DUP	DUP	12/07/06 9:24			41.3	41.3	%				0	20	

Carbon Resources ACZ Project ID: ***L59732***

Project ID:

pH, Saturated Paste USDA No. 60 (21A)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217046													
L59732-01DUP	DUP	11/22/06 16:31			7.7	7.69	units				0.1	20	

Phosphorus, extractable (AB-DTPA) M365.1 - Automated Ascorbic Acid

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217438													
WG217438ICV	ICV	11/30/06 18:55	SCN000224	.65228		.649	mg/L	99.5	90	110			
WG217438ICB	ICB	11/30/06 18:57				.013	mg/L		-0.03	0.03			
WG217440													
WG217440ICV	ICV	11/30/06 19:33	SCN000224	.65228		.663	mg/L	101.6	90	110			
WG217440ICB	ICB	11/30/06 19:35				.013	mg/L		-0.03	0.03			
WG217440LFB1	LFB	11/30/06 19:36	WI061125-2	.5		.484	mg/Kg	96.8	85	115			
L59811-01DUP	DUP	11/30/06 19:39			8	7.6	mg/Kg				5.1	20	RA
L59811-02AS	AS	11/30/06 19:42	WI061125-2	50	6	51.3	mg/Kg	90.6	75	125			
WG217005PBS	PBS	11/30/06 19:49				7.1	mg/Kg		-3	3			N1
L59732-01DUP	DUP	11/30/06 19:51			18	17.5	mg/Kg				2.8	20	
L59732-02AS	AS	11/30/06 19:54	WI061125-2	50	15	62.5	mg/Kg	95	75	125			
WG217440LFB2	LFB	11/30/06 20:10	WI061125-2	.5		.505	mg/Kg	101	85	115			

Potassium, extractable (AB-DTPA) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217467													
WG217467ICV	ICV	12/04/06 13:51	II061128-2	20		18.58	mg/L	92.9	90	110			
WG217467ICB	ICB	12/04/06 13:54				U	mg/L		-0.9	0.9			
WG217005PBS	PBS	12/04/06 14:08				U	mg/L		-60	60			
L59732-01DUP	DUP	12/04/06 14:15			80	88	mg/L				9.5	20	RA
L59732-02AS	AS	12/04/06 14:22	II061116-2	4973.4095	240	5814	mg/L	112.1	75	125			
L59732-02ASD	ASD	12/04/06 14:25	II061116-2	4973.4095	240	6145	mg/L	118.7	75	125	5.54	20	

Potassium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217319													
WG217319ICV	ICV	11/29/06 20:05	II061128-2	20		19.22	mg/L	96.1	90	110			
WG217319ICB	ICB	11/29/06 20:09				U	mg/L		-0.9	0.9			
L59732-01DUP	DUP	11/29/06 20:28			.076	.0599	meq/L				23.7	20	RA

Saturation Percent USDA No. 60 (2)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217046													
L59732-01DUP	DUP	11/22/06 16:31			52.3	51.04	%				2.4	20	

Carbon Resources

ACZ Project ID: ***L59732***

Project ID:

Selenium, soluble (Hot Water) SM3500-Se.C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217220													
WG217220ICV	ICV	11/30/06 10:30	II061127-5	.025		.0272	mg/L	108.8	90	110			
WG217220ICB	ICB	11/30/06 10:33				U	mg/L		-0.003	0.003			
WG217223													
L59732-20AS	AS	11/30/06 14:14	II061113-3	.1	U	.097	mg/Kg	97	85	115			
L59732-20ASD	ASD	11/30/06 14:25	II061113-3	.1	U	.0985	mg/Kg	98.5	85	115	1.53	20	
WG216738PBS	PBS	11/30/06 15:18				U	mg/Kg		-0.015	0.015			
L59731-09DUP	DUP	11/30/06 15:25			U	U	mg/Kg				0	20	RA
L59731-10AS	AS	11/30/06 15:33	II061113-3	.1	U	.0961	mg/Kg	96.1	85	115			
L59731-10ASD	ASD	11/30/06 15:36	II061113-3	.1	U	.0958	mg/Kg	95.8	85	115	0.31	20	

Sodium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217319													
WG217319ICV	ICV	11/29/06 20:05	II061128-2	100		95.35	mg/L	95.4	90	110			
WG217319ICB	ICB	11/29/06 20:09				U	mg/L		-0.9	0.9			
L59732-01DUP	DUP	11/29/06 20:28			.3	.578	meq/L				63.3	20	RC

Solids, Percent CLPSOW390, PART F, D-98

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217210													
WG217210PBS	PBS	11/28/06 12:00				U	%		99.9	100.1			
L59732-20DUP	DUP	11/29/06 9:15			89.7	89.49	%				0.2	20	

Sulfur Organic Residual M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217075													
L59732-20DUP	DUP	11/25/06 18:00			.02	.02	%				0	20	RA

Sulfur Pyritic Sulfide M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217075													
L59732-20DUP	DUP	11/25/06 18:00			U	U	%				0	20	RA

Sulfur Sulfate M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217075													
L59732-20DUP	DUP	11/25/06 18:00			.02	.02	%				0	20	RA

Sulfur Total M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217075													
WG217075PBS	PBS	11/24/06 11:00				U	%		-0.03	0.03			
WG217075LCSS	LCSS	11/24/06 13:23	PCN25383	4.24		4.3	%		80	120			
L59732-20DUP	DUP	11/25/06 18:00			.04	.04	%				0	20	RA

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Inorganic QC Summary

Carbon Resources

Project ID:

ACZ Project ID: ***L59732***

Total Sulfur Minus Sulfate M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217075													
L59732-20DUP	DUP	11/25/06 18:00			.02	.02	%				0	20	RA

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Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59732***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-01	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218283	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

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Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59732***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-02	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218283	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59732***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-03	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218283	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59732***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-04	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218283	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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L59732-05	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218283	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-06	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218283	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-07	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218283	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-08	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218283	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-09	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218283	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-10	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218283	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-11	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-12	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-13	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-14	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-15	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ Project ID: ***L59732***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-16	WG216774	Boron, soluble (Hot Water)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217223	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217319	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217075	Sulfur Organic Residual	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Total Sulfur minus Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218152	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-17	WG216774	Boron, soluble (Hot Water)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217223	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217319	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217075	Sulfur Organic Residual	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Total Sulfur minus Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218152	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ Project ID: ***L59732***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-18	WG216774	Boron, soluble (Hot Water)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217223	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217319	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217075	Sulfur Organic Residual	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Total Sulfur minus Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ Project ID: ***L59732***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59732-20	WG216774	Boron, soluble (Hot Water)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217319	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217467	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217319	Potassium, soluble (Sat. Paste)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217223	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217319	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217046	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217075	Sulfur Organic Residual	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Total	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Total Sulfur minus Sulfate	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217444	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217440	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

Carbon Resources

ACZ Project ID: ***L59732***

Metals Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Selenium, soluble (Hot Water)	SM3500-Se.C

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3
pH, Saturated Paste	USDA No. 60 (21A)
Saturation Percent	USDA No. 60 (2)
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2
Solids, Percent	CLPSOW390, PART F, D-98
Sulfur Forms	M600/2-78-054 3.2.4
Texture by Hydrometer	ASTM D 422 Hydrometer

Wet Chemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid

ACZ Laboratories, Inc.

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Sample Receipt

Carbon Resources

ACZ Project ID: L59732
Date Received: 10/31/2006
Received By:
Date Printed: 10/31/2006

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?			X
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
BUCKET X 8		22.5	16

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

ACZ Laboratories, Inc.

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Sample Receipt

Carbon Resources

ACZ Project ID: L59732
Date Received: 10/31/2006
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L59732-01	D-5 40-60"									X		
L59732-02	D-6 0-7"									X		
L59732-03	D-6 24-48"									X		
L59732-04	D-6 48-72"									X		
L59732-05	D-7 0-6"									X		
L59732-06	D-7 6-20"									X		
L59732-07	D-7 20-42"									X		
L59732-08	D-7 42-58"									X		
L59732-09	D-7 58-70"									X		
L59732-10	D-8 0-6"									X		
L59732-11	D-8 6-13"									X		
L59732-12	D-8 13-20"									X		
L59732-13	D-8 20-48"									X		
L59732-14	D-9A 0-6"									X		
L59732-15	D-9A 6-12"									X		
L59732-16	D-9A 12-30"									X		
L59732-17	D-9A 30-68"									X		
L59732-18	D-9A 80-95"									X		
L59732-20	D-9A 95-115"									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L59732

Carbon Resources Soil Sample Increments
Kinney Mine, Scofield Utah
Sampled October 14-18, 2006
By Bruce Chesler and Greg Hunt
Telephone 435-826-4961
Billed to Carbon Resources

Mailed UPS on October 24, 2006 to:
ACZ Laboratory
2773 Downhill Drive
Steamboat Springs, Colorado, 80487
Attn. Sue Webber telephone 1-800-334-5493 Ext.110

Soil Samples sent in 5-gallon white plastic buckets from Escalante, Utah, and coal samples sent separately in a bucket from Cedaredege, Colorado. The coal sample increments are required to have the following additional analyses, along with the soil horizons found above and below them in their respective soil positions. These will include soil horizons and coal materials sampled at 3 locations, (D3, D9A, D9B) including a total of 19 samples.

Total Organic Carbon (Combustion Method, Western States Lab Testing Program, 1998, volume 4.10, page 88)
Soluble Selenium reported in mg/kg (Hydric Generation AA-Spectrometry and Flourimetry of water extracted Selenium)
Available Boron reported in mg/kg (saturation extract)
Acid Potential reported % pyric S
Neutralization Potential Tons CaCo3 equivalent/1000 tons

The remaining samples are as follows:

D1 0-6, 6-16, 16-25, 25-40, 40-65, 65-90 (6 samples)

D2 0-6, 6-24 (2 samples)

D3 Coal and Soil sent in separate shipments 0-10, 10-20, 20-40, 40-60, 60-75, 1 coal (7)

D4 0-8, 8-16, (2 samples)

D5 0-6, 6-20, 20-40, 40-60 (4 samples)

D6 0-7, coal not sampled, 24-48, 48-72 (3 samples)

D7 0-6, 6-20, 20-42, 42-58, 58-70 (5 samples)

D8 0-6, 6-13, 13-26, 26-48 (4 samples)

D9A coal and soil sent in two shipments 0-6, 6-12, 12-30, 30-68, 68-95, 95-115, 115-140 (7 samples)

D9B coal and soil sent separately 0-6, 6-12, 12-30, 30-52, 52-80, 80-102 (6 samples)

D10 0-5, 5-11, 11-23, 23-35 (4 samples)

D11 0-12, did not sample coal, 62-82 (2samples)

D12 0-6, 6-14, 14-28, 28-48, 48-66 (5 samples)

2A-1 0-10, 10-24, 24-44, 44-65, 65-80 (5 samples)

2A-2 0-5, 5-14, 14-25, 25-38 (4 samples)

2A-3 0-9, 9-19, 19-36, 36-52 (4 samples)

2A-5 0-6, 6-12, 12-24, 24-48 (4 samples)

2A-6 0-6, 6-12, 12-24, 24-40, 40-66, 66-80 (6 samples)

2A-7 0-7, 7-20, 20-38 (3 samples)

2B-1 0-9, 9-19, 19-33, 33-51 (4 samples)

1A-1 0-6, 6-17, 17-28, 28-60, 60-100 (5 samples)

1A-2 15-25, 25-40, 40-60, 60-75, 75-90 (5 samples)

1B1 0-7, 7-15, 15-28, 28-60 (4 samples)

Please give me a call if you have any questions on methodology at my office. Phone # 435-826-4961

Thanks,
Bruce Chesler
Representing, Carbon Resources
Escalante, Utah

LDC 10·26·06

Sue Webber

From: GHuntBBC@aol.com
Sent: Friday, October 27, 2006 12:52 PM
To: bches@scinternet.net; Sue Webber
Subject: Sue Weber Carbon Resources Soil Samples

FROM: **Geo-Hunt Consulting**
16577 Columbine Lane
Cedaredge, CO 81413
970-856-9477

TO: **Sue Webber, Project Manager**
ACZ Laboratories, Inc.
2773 Downhill Drive,
Steamboat Springs, Co 80487

RE: **TRANSMITTAL OF SOIL SAMPLES**

Dear Sue:
You have already received a rather large number of samples from BRUCE CHESLER, soil scientist from Escalante Utah, from the Carbon Resources "Kinney" Property, Scofield Utah. Enclosed please find the following seven soil samples taken from the same property and are a part of the same project. These samples should be processed with those received directly from Bruce and all of the results should be returned to Bruce.

D3
D4 19"-72"
D9-A 12"- 30"
D9-A 30"- 68"
D9-B 12"- 30"
D9-B 30"- 50"
D11 11"-48"

Note that some of the bag samples received from Bruce and or I may be labeled either Carbon Resources or Kinney. Both names indicate the same project.

Thank you for your prompt attention to this project.

Greg Hunt

Cc: Bruce Chesler

10/31/2006

Very Fine Sand

analyst: as
date: 12-12-06

ACZ L#	Total sample wt. gms	% <2000um sieve	Wt. of sxs used for Texture gms	Wt. of sxs between 105um & 53um gm.	% VFS
L59732-01	219.77	84.4	40.0	6.2	**13.10**
L59732-02	300.77	87.6	40.0	5.6	**12.30**
L59732-03	240.99	72.4	40.0	6.2	**11.30**
L59732-04	272.23	61.4	40.0	5.8	**8.9**
L59732-05	211.88	68.2	40.0	5.7	**9.7**
L59732-06	228.73	53.9	40.0	5.2	**7.1**
L59732-07	225.47	67.7	40.0	5.0	**8.5**
L59732-08	257.01	70.3	40.0	5.2	**9.1**
L59732-09	234.19	94.6	40.0	10.0	**23.6**
L59732-10	212.60	92.1	40.0	8.8	**20.3**
L59732-11	186.83	90.5	40.0	9.3	**21.1**
L59732-12	207.24	96.9	40.0	10.0	**24.2**
L59732-13	208.49	92.6	40.0	10.3	**23.9**
L59732-14	221.90	75.6	40.0	7.6	**14.4**
L59732-15	232.91	79.3	40.0	7.8	**15.4**
L59732-16	274.03	59.8	40.0	3.8	**5.6**
L59732-17	254.63	51.7	40.0	2.0	**2.6**
L59732-18	181.46	80.3	40.0	7.2	**14.5**
L59732-20	200.70	74.4	40.0	8.3	**15.5**
dup L59732-01	219.77	84.4	40.	6.6	**13.9**

(wt of sxs between 105um & 53um) / (wt. of sxs used for texture) = VFS of texture

(VFS of Texture) x (% <2000um) = % VFS

additional data from:

-sieve2000 WG216880

-sieve53 WG217642

-texture WG217417

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

December 21, 2006

Report to:
Clay Wisdom
Carbon Resources
PO Box 1789
Albuquerque, NM 87192

Bill to:
Clay Wisdom
Carbon Resources
PO Box 11789
Albuquerque, NM 87192

cc: Greg Hunt, Bruce Chesler

Project ID:
ACZ Project ID: L59733

Clay Wisdom:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 31, 2006. This project has been assigned to ACZ's project number, L59733. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L59733. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after January 21, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

If you have any questions or other needs, please contact your Project Manager.

Sue Webber 21/Dec/06

Sue Webber, Project Manager, has reviewed and approved this report in its entirety.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 8048: (800) 334-5493

Case Narrative

Carbon Resources

December 21, 2006

Project ID:
ACZ Project ID: L59733

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 20 soil samples from Carbon Resources on October 31, 2006. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L59733. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were not performed within EPA recommended holding times. The EPA holding times apply to water samples, not soil so the "H" flags are not applicable.

Sample Analysis

These samples were analyzed for inorganic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The following anomalies required further explanation not provided by the Extended Qualifier Report:

1. For Nitrate/Nitrite, extractable values flagged with an "N1", the Prep Blank (PBS) was detected above the MDL. The data was flagged and accepted since this is considered typical procedural contamination.

2. For Phosphorus, extractable values flagged with an "N1", the Prep Blank (PBS) was detected above the MDL. The data was flagged and accepted since this is considered typical procedural contamination.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 115-145"

ACZ Sample ID: ***L59733-01***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 14:49	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	0.57		*	mg/Kg	0.05	0.3	12/08/06 5:29	gme
Calcium, soluble (Sat. Paste)	M6010B ICP	12.70			meq/L	0.01	0.05	12/07/06 4:26	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	2.67			meq/L	0.02	0.08	12/07/06 4:26	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	200		*	mg/Kg	20	50	12/06/06 12:49	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.351			meq/L	0.008	0.03	12/07/06 4:26	msh
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	12/01/06 11:43	djt
Sodium Absorption Ratio	Calculation	0.10	B			0.03	0.15	12/21/06 10:26	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.30			meq/L	0.01	0.04	12/07/06 4:26	msh

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 115-145"

ACZ Sample ID: ***L59733-01***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	0			t CaCO3/Kt	1	5	12/21/06 10:26	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	5			t CaCO3/Kt	1	5	12/21/06 10:26	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	5			t CaCO3/Kt	1	5	12/21/06 10:26	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.3	B	*	%	0.1	0.5	12/05/06 9:22	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	1.250		*	mmhos/cm	0.001	0.01	11/30/06 10:00	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.5		*	%	0.1	0.5	11/30/06 9:32	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.1		*	units	0.1	0.1	11/30/06 10:00	lwt/srs
Saturation Percent	USDA No. 60 (2)	42.50		*	%	0.01	0.1	11/30/06 10:00	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	81.2		*	% Passing	0.1	0.5	12/11/06 9:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	81.5		*	% Passing	0.1	0.5	11/24/06 8:00	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	89.5		*	%	0.1	0.5	11/28/06 13:00	lwt/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.01	B	*	%	0.01	0.1	11/30/06 0:00	lwt/srs
Sulfur Pyritic Sulfide			U	*	%	0.01	0.1	11/30/06 0:00	lwt/srs
Sulfur Sulfate		0.01	B	*	%	0.01	0.1	11/30/06 0:00	lwt/srs
Sulfur Total		0.02	B	*	%	0.01	0.1	11/30/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.01	B	*	%	0.01	0.1	11/30/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		22.5		*	%	0.1	0.5	12/08/06 0:00	srs
Sand		50.0		*	%	0.1	0.5	12/08/06 0:00	srs
Silt		27.5		*	%	0.1	0.5	12/08/06 0:00	srs
Texture Classification		L		*				12/08/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9A 115-145"

ACZ Sample ID: ***L59733-01***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 9:20	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:00	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/28/06 15:13	jjr
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 16:11	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 16:00	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:00	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	3.6			mg/Kg	0.2	1	12/21/06 10:26	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.2	H	*	mg/Kg	0.2	1	12/02/06 18:13	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.6	H	*	mg/Kg	0.1	0.5	12/02/06 18:13	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.046	H	*	%	0.004	0.02	11/18/06 20:41	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	13	H	*	mg/Kg	1	5	11/30/06 20:29	paulb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 0-6"

ACZ Sample ID: ***L59733-02***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 15:06	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	0.46		*	mg/Kg	0.05	0.3	12/08/06 5:45	gme
Calcium, soluble (Sat. Paste)	M6010B ICP	2.76			meq/L	0.01	0.05	12/07/06 4:30	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.39			meq/L	0.02	0.08	12/07/06 4:30	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	250		*	mg/Kg	20	50	12/06/06 12:56	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.317			meq/L	0.008	0.03	12/07/06 4:30	msh
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	12/01/06 11:54	djt
Sodium Absorption Ratio	Calculation	0.18				0.03	0.15	12/21/06 10:26	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.23			meq/L	0.01	0.04	12/07/06 4:30	msh

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487(800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 0-6"

ACZ Sample ID: ***L59733-02***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	0			t CaCO3/Kt	1	5	12/21/06 10:26	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	24			t CaCO3/Kt	1	5	12/21/06 10:26	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	24			t CaCO3/Kt	1	5	12/21/06 10:26	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.7		*	%	0.1	0.5	12/05/06 10:08	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.430		*	mmhos/cm	0.001	0.01	11/30/06 11:21	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	2.4		*	%	0.1	0.5	11/30/06 9:49	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.4		*	units	0.1	0.1	11/30/06 11:21	lwt/srs
Saturation Percent	USDA No. 60 (2)	41.50		*	%	0.01	0.1	11/30/06 11:21	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	85.0		*	% Passing	0.1	0.5	12/11/06 10:15	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	82.3		*	% Passing	0.1	0.5	11/24/06 12:15	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	86.6		*	%	0.1	0.5	11/28/06 14:01	lwt/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.02	B	*	%	0.01	0.1	11/30/06 0:00	lwt/srs
Sulfur Pyritic Sulfide			U	*	%	0.01	0.1	11/30/06 0:00	lwt/srs
Sulfur Sulfate			U	*	%	0.01	0.1	11/30/06 0:00	lwt/srs
Sulfur Total		0.02	B	*	%	0.01	0.1	11/30/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.02	B	*	%	0.01	0.1	11/30/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		25.0		*	%	0.1	0.5	12/09/06 0:00	srs
Sand		35.0		*	%	0.1	0.5	12/09/06 0:00	srs
Silt		40.0		*	%	0.1	0.5	12/09/06 0:00	srs
Texture Classification		SiL		*				12/09/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 0-6"

ACZ Sample ID: ***L59733-02***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 10:02	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:03	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/28/06 15:26	jjr
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 16:34	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 16:06	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:03	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	2.9			mg/Kg	0.2	1	12/21/06 10:26	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	3.5	H	*	mg/Kg	0.2	1	12/02/06 18:16	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.6	H	*	mg/Kg	0.1	0.5	12/02/06 18:16	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.133	H	*	%	0.003	0.02	11/18/06 20:43	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	20	H	*	mg/Kg	1	5	11/30/06 20:31	paulb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 6-12"

ACZ Sample ID: ***L59733-03***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 15:23	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	0.49		*	mg/Kg	0.05	0.3	12/08/06 5:49	gme
Calcium, soluble (Sat. Paste)	M6010B ICP	2.47			meq/L	0.01	0.05	12/07/06 4:34	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.39			meq/L	0.02	0.08	12/07/06 4:34	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	170		*	mg/Kg	20	50	12/08/06 1:51	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.120			meq/L	0.008	0.03	12/07/06 4:34	msh
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	12/01/06 11:57	djt
Sodium Absorption Ratio	Calculation	0.17				0.03	0.15	12/21/06 10:26	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.21			meq/L	0.01	0.04	12/07/06 4:34	msh

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 6-12"

ACZ Sample ID: ***L59733-03***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	0			t CaCO3/Kt	1	5	12/21/06 10:26	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	22			t CaCO3/Kt	1	5	12/21/06 10:26	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	22			t CaCO3/Kt	1	5	12/21/06 10:26	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	2.4		*	%	0.1	0.5	12/05/06 10:31	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.370		*	mmhos/cm	0.001	0.01	11/30/06 12:42	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	2.2		*	%	0.1	0.5	11/30/06 10:05	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.4		*	units	0.1	0.1	11/30/06 12:42	lwt/srs
Saturation Percent	USDA No. 60 (2)	34.90		*	%	0.01	0.1	11/30/06 12:42	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	80.7		*	% Passing	0.1	0.5	12/11/06 11:31	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	88.2		*	% Passing	0.1	0.5	11/24/06 16:31	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	85.7		*	%	0.1	0.5	11/28/06 15:02	lwt/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.03	B	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Pyritic Sulfide			U	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Sulfate			U	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Total		0.03	B	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.03	B	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		17.5		*	%	0.1	0.5	12/09/06 0:00	srs
Sand		51.3		*	%	0.1	0.5	12/09/06 0:00	srs
Silt		31.3		*	%	0.1	0.5	12/09/06 0:00	srs
Texture Classification		L		*				12/09/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 6-12"

ACZ Sample ID: ***L59733-03***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3 .							11/30/06 10:22	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:06	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/28/06 15:40	jjr
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 16:45	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 16:12	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:06	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.9	B		mg/Kg	0.2	1	12/21/06 10:26	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.6	H	*	mg/Kg	0.2	1	12/02/06 18:18	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/02/06 18:18	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.24	H	*	%	0.02	0.1	11/18/06 20:45	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	31	H	*	mg/Kg	1	5	11/30/06 20:33	paulb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 12-30"

ACZ Sample ID: ***L59733-04***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 15:32	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	2.27		*	mg/Kg	0.05	0.3	12/08/06 6:01	gme
Calcium, soluble (Sat. Paste)	M6010B ICP	18.50			meq/L	0.01	0.05	12/07/06 4:38	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	3.87			meq/L	0.02	0.08	12/07/06 4:38	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	120		*	mg/Kg	20	50	12/08/06 2:15	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.174			meq/L	0.008	0.03	12/07/06 4:38	msh
Selenium, soluble (Hot Water)	SM3500-Se.C	0.007	B	*	mg/Kg	0.005	0.03	12/01/06 12:01	djt
Sodium Absorption Ratio	Calculation	0.07	B			0.03	0.15	12/21/06 10:26	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.25			meq/L	0.01	0.04	12/07/06 4:38	msh

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 12-30"

ACZ Sample ID: ***L59733-04***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	16			t CaCO3/Kt	1	5	12/21/06 10:26	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	51			t CaCO3/Kt	1	5	12/21/06 10:26	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	35			t CaCO3/Kt	1	5	12/21/06 10:26	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	23.1		*	%	0.1	0.5	12/05/06 10:54	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	1.610		*	mmhos/cm	0.001	0.01	11/30/06 14:03	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	5.1		*	%	0.1	0.5	11/30/06 10:21	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.1		*	units	0.1	0.1	11/30/06 14:03	lwt/srs
Saturation Percent	USDA No. 60 (2)	50.30		*	%	0.01	0.1	11/30/06 14:03	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	96.3		*	% Passing	0.1	0.5	12/11/06 12:47	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	47.2		*	% Passing	0.1	0.5	11/24/06 20:47	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	91.9		*	%	0.1	0.5	11/28/06 16:02	lwt/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.20		*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Pyritic Sulfide		0.12		*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Sulfate		0.20		*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Total		0.52		*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.32		*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		23.8		*	%	0.1	0.5	12/09/06 0:00	srs
Sand		50.0		*	%	0.1	0.5	12/09/06 0:00	srs
Silt		26.3		*	%	0.1	0.5	12/09/06 0:00	srs
Texture Classification		L		*				12/09/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 12-30"

ACZ Sample ID: ***L59733-04***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 10:43	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:09	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/28/06 15:53	jjr
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 16:57	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 16:18	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:09	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.5			mg/Kg	0.2	1	12/21/06 10:26	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.5	H	*	mg/Kg	0.2	1	12/02/06 18:19	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	12/02/06 18:19	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.73		*	%	0.04	0.2	11/18/06 20:46	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	3	BH	*	mg/Kg	1	5	11/30/06 20:34	paulb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 30-52"

ACZ Sample ID: ***L59733-05***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 15:41	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	1.41		*	mg/Kg	0.05	0.3	12/08/06 6:05	gme
Calcium, soluble (Sat. Paste)	M6010B ICP	25.10			meq/L	0.01	0.05	12/07/06 4:46	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	1.48			meq/L	0.02	0.08	12/07/06 4:46	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	30	B	*	mg/Kg	20	50	12/08/06 2:19	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.062			meq/L	0.008	0.03	12/07/06 4:46	msh
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	12/01/06 12:05	djt
Sodium Absorption Ratio	Calculation	0.04	B			0.03	0.15	12/21/06 10:27	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.16			meq/L	0.01	0.04	12/07/06 4:46	msh

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 30-52"

ACZ Sample ID: ***L59733-05***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	35			t CaCO3/Kt	1	5	12/21/06 10:27	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	46			t CaCO3/Kt	1	5	12/21/06 10:27	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	11			t CaCO3/Kt	1	5	12/21/06 10:27	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	54.0		*	%	0.1	0.5	12/05/06 11:17	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	1.770		*	mmhos/cm	0.001	0.01	11/30/06 16:45	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	4.6		*	%	0.1	0.5	11/30/06 10:38	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.1		*	units	0.1	0.1	11/30/06 16:45	lwt/srs
Saturation Percent	USDA No. 60 (2)	59.00		*	%	0.01	0.1	11/30/06 16:45	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	97.1		*	% Passing	0.1	0.5	12/11/06 14:03	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	72.1		*	% Passing	0.1	0.5	11/25/06 1:03	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	91.5		*	%	0.1	0.5	11/28/06 17:03	lwt/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.51		*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Pyritic Sulfide		0.08	B	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Sulfate		0.54		*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Total		1.13		*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.59		*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		2.5		*	%	0.1	0.5	12/09/06 0:00	srs
Sand		93.8		*	%	0.1	0.5	12/09/06 0:00	srs
Silt		3.8		*	%	0.1	0.5	12/09/06 0:00	srs
Texture Classification		S		*				12/09/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 30-52"

ACZ Sample ID: ***L59733-05***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 11:04	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:12	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/28/06 16:06	jjr
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 17:08	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 16:30	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:12	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.2			mg/Kg	0.2	1	12/21/06 10:27	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.2	H	*	mg/Kg	0.2	1	12/02/06 18:24	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	12/02/06 18:24	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	1.43		*	%	0.05	0.3	11/18/06 22:38	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	1	BH	*	mg/Kg	1	5	11/30/06 20:35	paulb

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 52-80"

ACZ Sample ID: ***L59733-06***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 15:49	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	1.73		*	mg/Kg	0.05	0.3	12/08/06 6:09	gme
Calcium, soluble (Sat. Paste)	M6010B ICP	20.10			meq/L	0.01	0.05	12/07/06 4:50	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	6.54			meq/L	0.02	0.08	12/07/06 4:50	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	150		*	mg/Kg	20	50	12/08/06 2:23	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.424			meq/L	0.008	0.03	12/07/06 4:50	msh
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	12/01/06 12:08	djt
Sodium Absorption Ratio	Calculation	0.05	B			0.03	0.15	12/21/06 10:27	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.21			meq/L	0.01	0.04	12/07/06 4:50	msh

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 52-80"

ACZ Sample ID: ***L59733-06***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	2			t CaCO3/Kt	1	5	12/21/06 10:27	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	7			t CaCO3/Kt	1	5	12/21/06 10:27	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	5			t CaCO3/Kt	1	5	12/21/06 10:27	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.4		*	%	0.1	0.5	12/05/06 11:39	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	1.850		*	mmhos/cm	0.001	0.01	11/30/06 18:06	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.7		*	%	0.1	0.5	11/30/06 10:54	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.0		*	units	0.1	0.1	11/30/06 18:06	lwt/srs
Saturation Percent	USDA No. 60 (2)	38.00		*	%	0.01	0.1	11/30/06 18:06	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	78.6		*	% Passing	0.1	0.5	12/11/06 15:18	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	82.7		*	% Passing	0.1	0.5	11/25/06 5:18	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	95.5		*	%	0.1	0.5	11/28/06 18:04	lwt/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.02	B	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Pyritic Sulfide			U	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Sulfate		0.04	B	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Total		0.05	B	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.01	B	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		13.8		*	%	0.1	0.5	12/09/06 0:00	srs
Sand		60.0		*	%	0.1	0.5	12/09/06 0:00	srs
Silt		26.3		*	%	0.1	0.5	12/09/06 0:00	srs
Texture Classification		SL		*				12/09/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 52-80"

ACZ Sample ID: ***L59733-06***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 11:25	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:15	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/28/06 16:20	jjr
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 17:20	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 16:36	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:15	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.4	B		mg/Kg	0.2	1	12/21/06 10:27	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.1	H	*	mg/Kg	0.2	1	12/02/06 18:25	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/02/06 18:25	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.094	H	*	%	0.002	0.01	11/18/06 20:48	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	11	H	*	mg/Kg	1	5	11/30/06 20:37	paulb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 80-102"

ACZ Sample ID: ***L59733-07***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 16:15	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	0.86		*	mg/Kg	0.05	0.3	12/08/06 6:13	gme
Calcium, soluble (Sat. Paste)	M6010B ICP	19.40			meq/L	0.01	0.05	12/07/06 5:02	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	6.62			meq/L	0.02	0.08	12/07/06 5:02	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	180		*	mg/Kg	20	50	12/08/06 2:27	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.583			meq/L	0.008	0.03	12/07/06 5:02	msh
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	12/01/06 12:19	djt
Sodium Absorption Ratio	Calculation	0.06	B			0.03	0.15	12/21/06 10:27	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.24			meq/L	0.01	0.04	12/07/06 5:02	msh

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 80-102"

ACZ Sample ID: ***L59733-07***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	0			t CaCO3/Kt	1	5	12/21/06 10:27	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	6			t CaCO3/Kt	1	5	12/21/06 10:27	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	6			t CaCO3/Kt	1	5	12/21/06 10:27	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.9		*	%	0.1	0.5	12/05/06 12:02	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	1.730		*	mmhos/cm	0.001	0.01	11/30/06 19:27	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.6		*	%	0.1	0.5	11/30/06 11:10	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.0		*	units	0.1	0.1	11/30/06 19:27	lwt/srs
Saturation Percent	USDA No. 60 (2)	37.90		*	%	0.01	0.1	11/30/06 19:27	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	79.8		*	% Passing	0.1	0.5	12/11/06 16:34	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	82.7		*	% Passing	0.1	0.5	11/25/06 9:34	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	95.9		*	%	0.1	0.5	11/28/06 19:05	lwt/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.01	B	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Pyritic Sulfide			U	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Sulfate		0.02	B	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Total		0.03	B	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.01	B	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		15.0		*	%	0.1	0.5	12/09/06 0:00	srs
Sand		53.8		*	%	0.1	0.5	12/09/06 0:00	srs
Silt		31.3		*	%	0.1	0.5	12/09/06 0:00	srs
Texture Classification		L		*				12/09/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-9B 80-102"

ACZ Sample ID: ***L59733-07***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 11:45	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:18	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/28/06 16:33	jjr
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 17:31	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 16:42	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:18	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.4	B		mg/Kg	0.2	1	12/21/06 10:27	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.1	H	*	mg/Kg	0.2	1	12/02/06 18:27	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/02/06 18:27	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.060	H	*	%	0.002	0.01	11/18/06 20:53	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	11	H	*	mg/Kg	1	5	11/30/06 20:40	paulb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-10 0-5"

ACZ Sample ID: ***L59733-08***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 16:24	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	3.23			meq/L	0.01	0.05	12/07/06 5:07	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.67			meq/L	0.02	0.08	12/07/06 5:07	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	410		*	mg/Kg	20	50	12/08/06 2:31	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	1.110			meq/L	0.008	0.03	12/07/06 5:07	msh
Sodium Absorption Ratio	Calculation	0.16				0.03	0.15	12/21/06 10:27	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.23			meq/L	0.01	0.04	12/07/06 5:07	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	3.3		*	%	0.1	0.5	12/05/06 12:25	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.530		*	mmhos/cm	0.001	0.01	11/30/06 20:48	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.0		*	%	0.1	0.5	11/30/06 11:27	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.3		*	units	0.1	0.1	11/30/06 20:48	lwt/srs
Saturation Percent	USDA No. 60 (2)	50.70		*	%	0.01	0.1	11/30/06 20:48	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	68.2		*	% Passing	0.1	0.5	12/11/06 17:50	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	81.6		*	% Passing	0.1	0.5	11/25/06 13:50	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	82.6		*	%	0.1	0.5	11/28/06 20:05	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		15.0		*	%	0.1	0.5	12/09/06 0:00	srs
Sand		47.5		*	%	0.1	0.5	12/09/06 0:00	srs
Silt		37.5		*	%	0.1	0.5	12/09/06 0:00	srs
Texture Classification		L		*				12/09/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-10 0-5"

ACZ Sample ID: ***L59733-08***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 12:06	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:22	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 17:42	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 16:48	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:22	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.8			mg/Kg	0.2	1	12/21/06 10:27	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.8	H	*	mg/Kg	0.2	1	12/02/06 18:28	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	12/02/06 18:28	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.307	H	*	%	0.009	0.04	11/18/06 22:56	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	21	H	*	mg/Kg	1	5	11/30/06 20:41	paulb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-10 5-11"

ACZ Sample ID: ***L59733-09***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 16:32	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.34			meq/L	0.01	0.05	12/07/06 5:11	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.28			meq/L	0.02	0.08	12/07/06 5:11	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	180		*	mg/Kg	20	50	12/08/06 2:35	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.147			meq/L	0.008	0.03	12/07/06 5:11	msh
Sodium Absorption Ratio	Calculation	0.40				0.03	0.15	12/21/06 10:27	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.36			meq/L	0.01	0.04	12/07/06 5:11	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	3.1		*	%	0.1	0.5	12/05/06 12:48	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.280		*	mmhos/cm	0.001	0.01	11/30/06 22:09	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.7		*	%	0.1	0.5	11/30/06 11:43	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.3		*	units	0.1	0.1	11/30/06 22:09	lwt/srs
Saturation Percent	USDA No. 60 (2)	48.30		*	%	0.01	0.1	11/30/06 22:09	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	91.1		*	% Passing	0.1	0.5	12/11/06 19:06	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	47.4		*	% Passing	0.1	0.5	11/25/06 18:06	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	87.4		*	%	0.1	0.5	11/28/06 21:06	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		25.0		*	%	0.1	0.5	12/10/06 0:00	srs
Sand		33.8		*	%	0.1	0.5	12/10/06 0:00	srs
Silt		41.3		*	%	0.1	0.5	12/10/06 0:00	srs
Texture Classification		SiL		*				12/10/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-10 5-11"

ACZ Sample ID: ***L59733-09***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 12:27	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:25	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 17:54	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 16:54	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:25	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.5			mg/Kg	0.2	1	12/21/06 10:27	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	2.1	H	*	mg/Kg	0.2	1	12/02/06 18:29	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.6	H	*	mg/Kg	0.1	0.5	12/02/06 18:29	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.115	H	*	%	0.003	0.01	11/18/06 22:43	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	13	H	*	mg/Kg	1	5	11/30/06 20:42	paulb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-10 11-23"

ACZ Sample ID: ***L59733-10***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 16:41	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.82			meq/L	0.01	0.05	12/07/06 5:15	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.25			meq/L	0.02	0.08	12/07/06 5:15	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	130		*	mg/Kg	20	50	12/08/06 2:39	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.094			meq/L	0.008	0.03	12/07/06 5:15	msh
Sodium Absorption Ratio	Calculation	0.49				0.03	0.15	12/21/06 10:28	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.36			meq/L	0.01	0.04	12/07/06 5:15	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.8		*	%	0.1	0.5	12/05/06 13:11	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.220		*	mmhos/cm	0.001	0.01	11/30/06 23:30	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.7		*	%	0.1	0.5	11/30/06 12:00	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.4		*	units	0.1	0.1	11/30/06 23:30	lwt/srs
Saturation Percent	USDA No. 60 (2)	61.70		*	%	0.01	0.1	11/30/06 23:30	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	97.0		*	% Passing	0.1	0.5	12/11/06 20:22	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	23.0		*	% Passing	0.1	0.5	11/25/06 22:22	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	91.7		*	%	0.1	0.5	11/28/06 22:07	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		38.8		*	%	0.1	0.5	12/10/06 0:00	srs
Sand		26.3		*	%	0.1	0.5	12/10/06 0:00	srs
Silt		35.0		*	%	0.1	0.5	12/10/06 0:00	srs
Texture Classification		SiCL		*				12/10/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-10 11-23"

ACZ Sample ID: ***L59733-10***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 12:47	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:28	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 18:05	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 17:00	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:28	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.9	B		mg/Kg	0.2	1	12/21/06 10:28	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.5	H	*	mg/Kg	0.2	1	12/02/06 18:30	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.6	H	*	mg/Kg	0.1	0.5	12/02/06 18:30	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.083	H	*	%	0.002	0.01	11/18/06 20:56	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	7	H	*	mg/Kg	1	5	11/30/06 20:43	paulb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-10 23-35"

ACZ Sample ID: ***L59733-11***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 16:50	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.81			meq/L	0.01	0.05	12/07/06 5:19	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.39			meq/L	0.02	0.08	12/07/06 5:19	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	130		*	mg/Kg	20	50	12/08/06 2:43	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.187			meq/L	0.008	0.03	12/07/06 5:19	msh
Sodium Absorption Ratio	Calculation	0.43				0.03	0.15	12/21/06 10:28	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.34			meq/L	0.01	0.04	12/07/06 5:19	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.7		*	%	0.1	0.5	12/05/06 13:34	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.250		*	mmhos/cm	0.001	0.01	12/01/06 0:51	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.0		*	%	0.1	0.5	11/30/06 12:16	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.3		*	units	0.1	0.1	12/01/06 0:51	lwt/srs
Saturation Percent	USDA No. 60 (2)	69.60		*	%	0.01	0.1	12/01/06 0:51	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	98.0		*	% Passing	0.1	0.5	12/11/06 21:37	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	18.9		*	% Passing	0.1	0.5	11/26/06 2:37	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	91.2		*	%	0.1	0.5	11/28/06 23:07	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		42.5		*	%	0.1	0.5	12/10/06 0:00	srs
Sand		22.5		*	%	0.1	0.5	12/10/06 0:00	srs
Silt		35.0		*	%	0.1	0.5	12/10/06 0:00	srs
Texture Classification		SIC		*				12/10/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-10 23-35"

ACZ Sample ID: ***L59733-11***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 13:08	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:31	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 18:17	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 17:06	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:31	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	2.0			mg/Kg	0.2	1	12/21/06 10:28	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	2.7	H	*	mg/Kg	0.2	1	12/02/06 18:31	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/02/06 18:31	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.056	H	*	%	0.002	0.01	11/18/06 20:57	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	8	H	*	mg/Kg	1	5	11/30/06 20:44	paulb

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-11 0-12"

ACZ Sample ID: ***L59733-12***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 16:58	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	2.98			meq/L	0.01	0.05	12/07/06 5:23	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.35			meq/L	0.02	0.08	12/07/06 5:23	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	230		*	mg/Kg	20	50	12/08/06 2:47	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.217			meq/L	0.008	0.03	12/07/06 5:23	msh
Sodium Absorption Ratio	Calculation	0.20				0.03	0.15	12/21/06 10:28	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.26			meq/L	0.01	0.04	12/07/06 5:23	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.6		*	%	0.1	0.5	12/05/06 13:57	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.420		*	mmhos/cm	0.001	0.01	12/01/06 2:12	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	3.1		*	%	0.1	0.5	11/30/06 12:32	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.6		*	units	0.1	0.1	12/01/06 2:12	lwt/srs
Saturation Percent	USDA No. 60 (2)	40.80		*	%	0.01	0.1	12/01/06 2:12	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	88.3		*	% Passing	0.1	0.5	12/11/06 22:53	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	57.9		*	% Passing	0.1	0.5	11/26/06 6:53	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	85.5		*	%	0.1	0.5	11/29/06 0:08	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		25.0		*	%	0.1	0.5	12/10/06 0:00	srs
Sand		42.5		*	%	0.1	0.5	12/10/06 0:00	srs
Silt		32.5		*	%	0.1	0.5	12/10/06 0:00	srs
Texture Classification		L		*				12/10/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-11 0-12"

ACZ Sample ID: ***L59733-12***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 13:29	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:34	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 18:28	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 17:12	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:34	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.8			mg/Kg	0.2	1	12/21/06 10:28	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	2.4	H	*	mg/Kg	0.2	1	12/02/06 18:33	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.6	H	*	mg/Kg	0.1	0.5	12/02/06 18:33	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.076	H	*	%	0.002	0.01	11/18/06 20:59	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	15	H	*	mg/Kg	1	5	11/30/06 20:45	paulb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-11 11-48"

ACZ Sample ID: ***L59733-13***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 17:07	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, soluble (Hot Water)	M6010B ICP	1.41		*	mg/Kg	0.05	0.3	12/08/06 6:17	gme
Calcium, soluble (Sat. Paste)	M6010B ICP	20.50			meq/L	0.01	0.05	12/07/06 5:27	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	2.88			meq/L	0.02	0.08	12/07/06 5:27	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	110		*	mg/Kg	20	50	12/08/06 2:51	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.109			meq/L	0.008	0.03	12/07/06 5:27	msh
Selenium, soluble (Hot Water)	SM3500-Se.C		U	*	mg/Kg	0.005	0.03	12/01/06 12:23	djt
Sodium Absorption Ratio	Calculation	0.06	B			0.03	0.15	12/21/06 10:28	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.23			meq/L	0.01	0.04	12/07/06 5:27	msh

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-11 11-48"

ACZ Sample ID: ***L59733-13***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	12			t CaCO3/Kt	1	5	12/21/06 10:28	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	35			t CaCO3/Kt	1	5	12/21/06 10:28	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	23			t CaCO3/Kt	1	5	12/21/06 10:28	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	25.0		*	%	0.1	0.5	12/05/06 14:19	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	1.630		*	mmhos/cm	0.001	0.01	12/01/06 3:33	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	3.5		*	%	0.1	0.5	11/30/06 12:49	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.1		*	units	0.1	0.1	12/01/06 3:33	lwt/srs
Saturation Percent	USDA No. 60 (2)	53.20		*	%	0.01	0.1	12/01/06 3:33	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	93.1		*	% Passing	0.1	0.5	12/12/06 0:09	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	65.8		*	% Passing	0.1	0.5	11/26/06 11:09	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	86.4		*	%	0.1	0.5	11/29/06 1:09	lwt/srs
Sulfur Forms	M600/2-78-054 3.2.4								
Sulfur Organic Residual		0.22		*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Pyritic Sulfide		0.07	B	*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Sulfate		0.10		*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Sulfur Total		0.39		*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Total Sulfur minus Sulfate		0.29		*	%	0.01	0.1	12/01/06 0:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		17.5		*	%	0.1	0.5	12/10/06 0:00	srs
Sand		62.5		*	%	0.1	0.5	12/10/06 0:00	srs
Silt		20.0		*	%	0.1	0.5	12/10/06 0:00	srs
Texture Classification		SL		*				12/10/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-11 11-48"

ACZ Sample ID: ***L59733-13***
Date Sampled: *10/25/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 13:50	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:37	erf
Hot Water Extraction	ASA No. 9 M80-3, M25-9							11/28/06 16:46	jjr
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 18:40	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 17:18	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:37	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.7	B		mg/Kg	0.2	1	12/21/06 10:28	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.5	H	*	mg/Kg	0.2	1	12/02/06 18:34	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	12/02/06 18:34	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.240		*	%	0.007	0.03	11/18/06 22:44	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	2	BH	*	mg/Kg	1	5	11/30/06 20:47	paulb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-11 62-82"

ACZ Sample ID: ***L59733-14***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 17:15	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	12.80			meq/L	0.01	0.05	12/07/06 5:31	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	4.28			meq/L	0.02	0.08	12/07/06 5:31	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	140		*	mg/Kg	20	50	12/08/06 3:03	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.157			meq/L	0.008	0.03	12/07/06 5:31	msh
Sodium Absorption Ratio	Calculation	0.08	B			0.03	0.15	12/21/06 10:28	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.26			meq/L	0.01	0.04	12/07/06 5:31	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	3.6		*	%	0.1	0.5	12/05/06 14:42	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	1.330		*	mmhos/cm	0.001	0.01	12/01/06 4:54	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	5.3		*	%	0.1	0.5	11/30/06 13:05	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.6		*	units	0.1	0.1	12/01/06 4:54	lwt/srs
Saturation Percent	USDA No. 60 (2)	44.80		*	%	0.01	0.1	12/01/06 4:54	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	93.7		*	% Passing	0.1	0.5	12/12/06 1:25	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	32.8		*	% Passing	0.1	0.5	11/26/06 15:25	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	90.3		*	%	0.1	0.5	11/29/06 2:10	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		18.8		*	%	0.1	0.5	12/10/06 0:00	srs
Sand		51.3		*	%	0.1	0.5	12/10/06 0:00	srs
Silt		30.0		*	%	0.1	0.5	12/10/06 0:00	srs
Texture Classification		L		*				12/10/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-11 62-82"

ACZ Sample ID: ***L59733-14***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 14:10	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:40	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 18:51	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 17:24	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:40	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	0.6	B		mg/Kg	0.2	1	12/21/06 10:28	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.3	H	*	mg/Kg	0.2	1	12/02/06 18:35	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/02/06 18:35	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.153	H	*	%	0.004	0.02	11/18/06 22:45	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	9	H	*	mg/Kg	1	5	11/30/06 20:48	paulb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-12 0-6"

ACZ Sample ID: ***L59733-15***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 17:24	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	2.11			meq/L	0.01	0.05	12/07/06 5:35	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.62			meq/L	0.02	0.08	12/07/06 5:35	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	440		*	mg/Kg	20	50	12/08/06 3:07	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	1.060			meq/L	0.008	0.03	12/07/06 5:35	msh
Sodium Absorption Ratio	Calculation	0.18				0.03	0.15	12/21/06 10:28	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.21			meq/L	0.01	0.04	12/07/06 5:35	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	3.2		*	%	0.1	0.5	12/05/06 15:05	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.420		*	mmhos/cm	0.001	0.01	12/01/06 6:15	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.7		*	%	0.1	0.5	11/30/06 13:21	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.8		*	units	0.1	0.1	12/01/06 6:15	lwt/srs
Saturation Percent	USDA No. 60 (2)	55.90		*	%	0.01	0.1	12/01/06 6:15	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	76.6		*	% Passing	0.1	0.5	12/12/06 2:40	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	91.0		*	% Passing	0.1	0.5	11/26/06 19:40	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	79.0		*	%	0.1	0.5	11/29/06 3:10	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		12.5		*	%	0.1	0.5	12/10/06 0:00	srs
Sand		50.0		*	%	0.1	0.5	12/10/06 0:00	srs
Silt		37.5		*	%	0.1	0.5	12/10/06 0:00	srs
Texture Classification		L		*				12/10/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-12 0-6"

ACZ Sample ID: ***L59733-15***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 14:31	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:44	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 19:02	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 17:30	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:44	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	2.6			mg/Kg	0.2	1	12/21/06 10:28	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	2.6	H	*	mg/Kg	0.2	1	12/02/06 18:40	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	12/02/06 18:40	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.246	H	*	%	0.009	0.04	11/18/06 22:46	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	22	H	*	mg/Kg	1	5	11/30/06 20:49	paulb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-12 6-14"

ACZ Sample ID: ***L59733-16***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 17:33	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.23			meq/L	0.01	0.05	12/07/06 5:39	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.41			meq/L	0.02	0.08	12/07/06 5:39	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	240		*	mg/Kg	20	50	12/08/06 3:11	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.376			meq/L	0.008	0.03	12/07/06 5:39	msh
Sodium Absorption Ratio	Calculation	0.30				0.03	0.15	12/21/06 10:28	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.28			meq/L	0.01	0.04	12/07/06 5:39	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.0		*	%	0.1	0.5	12/05/06 15:28	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.270		*	mmhos/cm	0.001	0.01	12/01/06 7:36	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.7		*	%	0.1	0.5	11/30/06 13:38	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.8		*	units	0.1	0.1	12/01/06 7:36	lwt/srs
Saturation Percent	USDA No. 60 (2)	42.70		*	%	0.01	0.1	12/01/06 7:36	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	77.3		*	% Passing	0.1	0.5	12/12/06 3:56	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	84.0		*	% Passing	0.1	0.5	11/26/06 23:56	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	84.8		*	%	0.1	0.5	11/29/06 4:11	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		13.8		*	%	0.1	0.5	12/11/06 0:00	srs
Sand		52.5		*	%	0.1	0.5	12/11/06 0:00	srs
Silt		33.8		*	%	0.1	0.5	12/11/06 0:00	srs
Texture Classification		L		*				12/11/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-12 6-14"

ACZ Sample ID: ***L59733-16***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 14:52	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:47	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 19:14	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 17:36	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:47	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	2.0			mg/Kg	0.2	1	12/21/06 10:28	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	2.7	H	*	mg/Kg	0.2	1	12/02/06 18:41	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/02/06 18:41	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.108	H	*	%	0.003	0.01	11/18/06 21:05	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	16	H	*	mg/Kg	1	5	11/30/06 20:50	paulb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-12 14-28"

ACZ Sample ID: ***L59733-17***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 17:59	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.82			meq/L	0.01	0.05	12/07/06 5:51	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.31			meq/L	0.02	0.08	12/07/06 5:51	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	170		*	mg/Kg	20	50	12/08/06 3:16	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.195			meq/L	0.008	0.03	12/07/06 5:51	msh
Sodium Absorption Ratio	Calculation	0.35				0.03	0.15	12/21/06 10:28	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.27			meq/L	0.01	0.04	12/07/06 5:51	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.7		*	%	0.1	0.5	12/05/06 15:51	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.210		*	mmhos/cm	0.001	0.01	12/01/06 8:57	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.5		*	%	0.1	0.5	11/30/06 13:54	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.0		*	units	0.1	0.1	12/01/06 8:57	lwt/srs
Saturation Percent	USDA No. 60 (2)	36.50		*	%	0.01	0.1	12/01/06 8:57	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	81.2		*	% Passing	0.1	0.5	12/12/06 5:12	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	69.5		*	% Passing	0.1	0.5	11/27/06 4:12	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	94.7		*	%	0.1	0.5	11/29/06 5:12	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		12.5		*	%	0.1	0.5	12/11/06 0:00	srs
Sand		51.3		*	%	0.1	0.5	12/11/06 0:00	srs
Silt		36.3		*	%	0.1	0.5	12/11/06 0:00	srs
Texture Classification		L		*				12/11/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-12 14-28"

ACZ Sample ID: ***L59733-17***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 15:12	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:50	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 19:25	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 17:42	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:50	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.9			mg/Kg	0.2	1	12/21/06 10:28	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	2.6	H	*	mg/Kg	0.2	1	12/02/06 18:42	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/02/06 18:42	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.42	H	*	%	0.01	0.06	11/18/06 22:47	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	13	H	*	mg/Kg	1	5	11/30/06 21:06	paulb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-12 28-48"

ACZ Sample ID: ***L59733-18***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 18:07	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.15			meq/L	0.01	0.05	12/07/06 5:55	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.36			meq/L	0.02	0.08	12/07/06 5:55	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	170		*	mg/Kg	20	50	12/08/06 3:20	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.163			meq/L	0.008	0.03	12/07/06 5:55	msh
Sodium Absorption Ratio	Calculation	0.32				0.03	0.15	12/21/06 10:28	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.28			meq/L	0.01	0.04	12/07/06 5:55	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.4	B	*	%	0.1	0.5	12/05/06 16:14	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.250		*	mmhos/cm	0.001	0.01	12/01/06 10:18	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.6		*	%	0.1	0.5	11/30/06 14:10	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.1		*	units	0.1	0.1	12/01/06 10:18	lwt/srs
Saturation Percent	USDA No. 60 (2)	36.40		*	%	0.01	0.1	12/01/06 10:18	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	82.9		*	% Passing	0.1	0.5	12/12/06 6:28	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	67.4		*	% Passing	0.1	0.5	11/27/06 8:28	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	94.6		*	%	0.1	0.5	11/29/06 6:12	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		18.8		*	%	0.1	0.5	12/11/06 0:00	srs
Sand		53.8		*	%	0.1	0.5	12/11/06 0:00	srs
Silt		27.5		*	%	0.1	0.5	12/11/06 0:00	srs
Texture Classification		L		*				12/11/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-12 28-48"

ACZ Sample ID: ***L59733-18***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 15:33	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:53	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 19:37	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 17:48	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:53	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.8			mg/Kg	0.2	1	12/21/06 10:28	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	2.5	H	*	mg/Kg	0.2	1	12/02/06 18:44	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/02/06 18:44	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.047	H	*	%	0.002	0.009	11/18/06 21:07	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	11	H	*	mg/Kg	1	5	11/30/06 21:07	paulb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-12 48-66"

ACZ Sample ID: ***L59733-19***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 18:16	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.63			meq/L	0.01	0.05	12/07/06 5:59	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.33			meq/L	0.02	0.08	12/07/06 5:59	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	140		*	mg/Kg	20	50	12/08/06 3:24	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.088			meq/L	0.008	0.03	12/07/06 5:59	msh
Sodium Absorption Ratio	Calculation	0.27				0.03	0.15	12/21/06 10:29	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.27			meq/L	0.01	0.04	12/07/06 5:59	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.2	B	*	%	0.1	0.5	12/05/06 16:37	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.300		*	mmhos/cm	0.001	0.01	12/01/06 11:39	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	2.6		*	%	0.1	0.5	11/30/06 14:27	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.7		*	units	0.1	0.1	12/01/06 11:39	lwt/srs
Saturation Percent	USDA No. 60 (2)	38.00		*	%	0.01	0.1	12/01/06 11:39	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	76.5		*	% Passing	0.1	0.5	12/12/06 7:44	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	84.4		*	% Passing	0.1	0.5	11/27/06 12:44	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	93.9		*	%	0.1	0.5	11/29/06 7:13	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		18.8		*	%	0.1	0.5	12/11/06 0:00	srs
Sand		56.3		*	%	0.1	0.5	12/11/06 0:00	srs
Silt		25.0		*	%	0.1	0.5	12/11/06 0:00	srs
Texture Classification		L		*				12/11/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

* *Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: D-12 48-66"

ACZ Sample ID: ***L59733-19***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 15:54	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:56	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 19:48	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 17:54	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:56	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.9			mg/Kg	0.2	1	12/21/06 10:29	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	2.5	H	*	mg/Kg	0.2	1	12/02/06 18:45	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.6	H	*	mg/Kg	0.1	0.5	12/02/06 18:45	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.034	H	*	%	0.002	0.008	11/18/06 21:09	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	11	H	*	mg/Kg	1	5	11/30/06 21:08	paulb

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-1 0-10"

ACZ Sample ID: ***L59733-20***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 18:24	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.59			meq/L	0.01	0.05	12/07/06 22:18	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.45			meq/L	0.02	0.08	12/07/06 22:18	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	280		*	mg/Kg	20	50	12/08/06 3:28	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.522			meq/L	0.008	0.03	12/07/06 22:18	gme
Sodium Absorption Ratio	Calculation	0.19				0.03	0.15	12/21/06 10:29	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.20			meq/L	0.01	0.04	12/07/06 22:18	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.2		*	%	0.1	0.5	12/05/06 16:59	brg/srs
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.310		*	mmhos/cm	0.001	0.01	12/01/06 13:00	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.5		*	%	0.1	0.5	11/30/06 14:43	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.6		*	units	0.1	0.1	12/01/06 13:00	lwt/srs
Saturation Percent	USDA No. 60 (2)	46.80		*	%	0.01	0.1	12/01/06 13:00	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	75.8		*	% Passing	0.1	0.5	12/12/06 8:59	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	91.8		*	% Passing	0.1	0.5	11/27/06 16:59	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	86.0		*	%	0.1	0.5	11/29/06 8:14	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		12.5		*	%	0.1	0.5	12/11/06 0:00	srs
Sand		57.5		*	%	0.1	0.5	12/11/06 0:00	srs
Silt		30.0		*	%	0.1	0.5	12/11/06 0:00	srs
Texture Classification		L		*				12/11/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-1 0-10"

ACZ Sample ID: ***L59733-20***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							11/30/06 16:15	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/08/06 9:59	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							11/28/06 20:00	jjr/as
Saturated Paste Extraction	USDA No. 60 (2)							11/29/06 18:00	erf/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/28/06 11:59	lwt/srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	4.4			mg/Kg	0.2	1	12/21/06 10:29	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.7	H	*	mg/Kg	0.2	1	12/02/06 18:46	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.3	BH	*	mg/Kg	0.1	0.5	12/02/06 18:46	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.160	H	*	%	0.005	0.03	11/18/06 22:48	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	14	H	*	mg/Kg	1	5	11/30/06 21:09	paulb

** Please refer to Qualifier Reports for detail.*

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calivation Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

ACZ Laboratories, Inc.
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Inorganic QC Summary

Carbon Resources ACZ Project ID: ***L59733***

Project ID:

Boron, soluble (Hot Water) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217803													
WG217803ICV	ICV	12/08/06 5:05	II061128-2	2		1.951	mg/L	97.6	90	110			
WG217803ICB	ICB	12/08/06 5:09				U	mg/L		-0.03	0.03			
WG217115PBS	PBS	12/08/06 5:25				U	mg/L		-0.15	0.15			
L59733-01AS	AS	12/08/06 5:37	II061207-3	2.5	.57	3.138	mg/L	102.7	75	125			
L59733-01ASD	ASD	12/08/06 5:41	II061207-3	2.5	.57	3.206	mg/L	105.4	75	125	2.14	20	
L59733-13DUP	DUP	12/08/06 6:21			1.41	1.5	mg/L				6.2	20	

Calcium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217718													
WG217718ICV	ICV	12/07/06 4:06	II061128-2	100		97.89	mg/L	97.9	90	110			
WG217718ICB	ICB	12/07/06 4:10				U	mg/L		-0.6	0.6			
L59733-04DUP	DUP	12/07/06 4:42			18.5	20.114	meq/L				8.4	20	
WG217767													
WG217767ICV	ICV	12/07/06 21:50	II061128-2	100		99.54	mg/L	99.5	90	110			
WG217767ICB	ICB	12/07/06 21:54				U	mg/L		-0.6	0.6			
L59733-04DUP	DUP	12/07/06 22:14			19.3	20.487	meq/L				6	20	

Carbon, total organic (TOC) ASA No.9 29-2.2.4 Combustion/IR

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217361													
WG217361PBS	PBS	12/05/06 9:00				U	%		-0.3	0.3			
L59733-01DUP	DUP	12/05/06 9:45			.3	.3	%				0	20	RA

Conductivity @25C M120.1 - Meter, w/ Saturated Paste Prep

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217371													
L59733-04DUP	DUP	11/30/06 15:24			1.61	1.67	mmhos/cm				3.7	20	

Magnesium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217718													
WG217718ICV	ICV	12/07/06 4:06	II061128-2	100		94.63	mg/L	94.6	90	110			
WG217718ICB	ICB	12/07/06 4:10				U	mg/L		-0.6	0.6			
L59733-04DUP	DUP	12/07/06 4:42			3.87	4.068	meq/L				5	20	
WG217767													
WG217767ICV	ICV	12/07/06 21:50	II061128-2	100		95.97	mg/L	96	90	110			
WG217767ICB	ICB	12/07/06 21:54				U	mg/L		-0.6	0.6			
L59733-04DUP	DUP	12/07/06 22:14			3.99	4.158	meq/L				4.1	20	

Neutralization Potential as CaCO3 M600/2-78-054 3.2.3

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217349													
WG217349LCSS	LCSS	11/30/06 9:16	PCN20880	100		121.35	%						
L59733-20DUP	DUP	11/30/06 15:00			.5	.55	%				9.5	20	RA

Carbon Resources
Project ID:

ACZ Project ID: ***L59733***

Nitrate/Nitrite as N, extractable (KCL) M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217513													
WG217513ICV	ICV	12/02/06 18:06	WI060906-3	2.416		2.411	mg/L	99.8	90	110			
WG217513ICB	ICB	12/02/06 18:07				U	mg/L		-0.06	0.06			
WG217513LFB	LFB	12/02/06 18:11	WI060906-4	2		2.126	mg/L	106.3	90	110			
WG217253PBS	PBS	12/02/06 18:12				1.36	mg/Kg		-0.6	0.6			N1
L59733-01DUP	DUP	12/02/06 18:14			4.2	4.16	mg/Kg				1	20	
L59733-02AS	AS	12/02/06 18:17	WI060906-4	20	3.5	24.58	mg/Kg	105.4	75	125			

Nitrite as N, extractable (KCL) M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217513													
WG217513ICV	ICV	12/02/06 18:06	WI060906-3	.609		.661	mg/L	108.5	90	110			
WG217513ICB	ICB	12/02/06 18:07				U	mg/L		-0.03	0.03			
WG217513LFB	LFB	12/02/06 18:11	WI060906-4	1		1.061	mg/L	106.1	90	110			
WG217253PBS	PBS	12/02/06 18:12				U	mg/Kg		-0.3	0.3			N1
L59733-01DUP	DUP	12/02/06 18:14			.6	.66	mg/Kg				9.5	20	RA
L59733-02AS	AS	12/02/06 18:17	WI060906-4	10	.6	10.75	mg/Kg	101.5	75	125			

Nitrogen, total Kjeldahl M351.2 - TKN by Block Digester

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216825													
WG216639ICV	ICV	11/18/06 20:36	WI061027-1	4		3.88	mg/L	97	90	110			
WG216639ICB	ICB	11/18/06 20:37				U	mg/L		-0.3	0.3			
WG216639LFB1	LFB	11/18/06 20:40	WI061027-5	2.5		2.48	%	99.2	85	115			
L59733-01MS	MS	11/18/06 20:42	2XTKN	.05375	.046	.1107	%	120.4	75	125			
L59733-02DUP	DUP	11/18/06 20:44			.133	.1336	%				0.5	20	
WG216639PBS1	PBS	11/18/06 20:52				.0021	%		-0.006	0.006			
WG216639PBS2	PBS	11/18/06 21:11				.003	%		-0.006	0.006			
WG216639LFB2	LFB	11/18/06 21:12	WI061027-5	2.5		2.4	%	96	85	115			

Percent Clay ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217692													
L59733-01DUP	DUP	12/08/06 23:51			22.5	22.5	%				0	20	

Percent Sand ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217692													
L59733-01DUP	DUP	12/08/06 23:51			50	50	%				0	20	

Percent Silt ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217692													
L59733-01DUP	DUP	12/08/06 23:51			27.5	27.5	%				0	20	

Carbon Resources
Project ID:

ACZ Project ID: ***L59733***

pH, Saturated Paste USDA No. 60 (21A)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217371													
L59733-04DUP	DUP	11/30/06 15:24			7.1	7.05	units				0.7	20	

Phosphorus, extractable (AB-DTPA) M365.1 - Automated Ascorbic Acid

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217438													
WG217438ICV	ICV	11/30/06 18:55	SCN000224	.65228		.649	mg/L	99.5	90	110			
WG217438ICB	ICB	11/30/06 18:57				.013	mg/L		-0.03	0.03			
WG217441													
WG217441ICV	ICV	11/30/06 20:23	SCN000224	.65228		.681	mg/L	104.4	90	110			
WG217441ICB	ICB	11/30/06 20:25				U	mg/L		-0.03	0.03			
WG217441LFB	LFB	11/30/06 20:26	WI061125-2	.5		.51	mg/Kg	102	85	115			
WG217336PBS	PBS	11/30/06 20:28				5.6	mg/Kg		-3	3			N1
L59733-01DUP	DUP	11/30/06 20:30			13	16.7	mg/Kg				24.9	20	RD
L59733-02AS	AS	11/30/06 20:32	WI061125-2	50	20	67	mg/Kg	94	75	125			

Potassium, extractable (AB-DTPA) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217482													
WG217336PBS	PBS	12/06/06 12:45				U	mg/L		-60	60			
L59733-01DUP	DUP	12/06/06 12:52			200	200	mg/L				0	20	
L59733-02AS	AS	12/06/06 13:03	II061116-2	4973.4095	250	5501	mg/L	105.6	75	125			
L59733-02ASD	ASD	12/06/06 13:06	II061116-2	4973.4095	250	5822	mg/L	112	75	125	5.67	20	
WG217804													
WG217804ICV	ICV	12/08/06 1:19	II061128-2	20		20.17	mg/L	100.9	90	110			
WG217804ICB	ICB	12/08/06 1:23				.47	mg/L		-0.9	0.9			
WG217336PBS	PBS	12/08/06 1:39				U	mg/L		-60	60			
L59733-01DUP	DUP	12/08/06 1:47			170	190	mg/L				11.1	20	RA
L59733-03AS	AS	12/08/06 1:59	II061207-3	4975.507	170	5097	mg/L	99	75	125			
L59733-03ASD	ASD	12/08/06 2:03	II061207-3	4975.507	170	5109	mg/L	99.3	75	125	0.24	20	

Potassium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217718													
WG217718ICV	ICV	12/07/06 4:06	II061128-2	20		19.84	mg/L	99.2	90	110			
WG217718ICB	ICB	12/07/06 4:10				U	mg/L		-0.9	0.9			
L59733-04DUP	DUP	12/07/06 4:42			.174	.1807	meq/L				3.8	20	
WG217767													
WG217767ICV	ICV	12/07/06 21:50	II061128-2	20		20.19	mg/L	101	90	110			
WG217767ICB	ICB	12/07/06 21:54				U	mg/L		-0.9	0.9			
L59733-04DUP	DUP	12/07/06 22:14			.18	.1771	meq/L				1.6	20	

Saturation Percent USDA No. 60 (2)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217371													
L59733-04DUP	DUP	11/30/06 15:24			50.3	53.48	%				6.1	20	

Carbon Resources
Project ID:

ACZ Project ID: ***L59733***

Selenium, soluble (Hot Water) SM3500-Se.C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217424													
WG217424ICV	ICV	12/01/06 9:55	II061127-5	.025		.027	mg/L	108	90	110			
WG217424ICB	ICB	12/01/06 9:59				U	mg/L		-0.003	0.003			
WG217426													
WG217115PBS	PBS	12/01/06 11:39				U	mg/Kg		-0.015	0.015			
L59733-01AS	AS	12/01/06 11:46	II061113-3	.1	U	.1011	mg/Kg	101.1	85	115			
L59733-01ASD	ASD	12/01/06 11:50	II061113-3	.1	U	.1008	mg/Kg	100.8	85	115	0.3	20	
L59733-13DUP	DUP	12/01/06 12:27			U	U	mg/Kg				0	20	RA

Sodium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217718													
WG217718ICV	ICV	12/07/06 4:06	II061128-2	100		99.24	mg/L	99.2	90	110			
WG217718ICB	ICB	12/07/06 4:10				U	mg/L		-0.9	0.9			
L59733-04DUP	DUP	12/07/06 4:42			.25	.241	meq/L				3.6	20	
WG217767													
WG217767ICV	ICV	12/07/06 21:50	II061128-2	100		100.03	mg/L	100	90	110			
WG217767ICB	ICB	12/07/06 21:54				U	mg/L		-0.9	0.9			
L59733-04DUP	DUP	12/07/06 22:14			.25	.244	meq/L				2.4	20	

Solids, Percent CLPSOW390, PART F, D-98

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217212													
WG217212PBS	PBS	11/28/06 12:00				U	%		99.9	100.1			
L59733-20DUP	DUP	11/29/06 9:15			86	85.32	%				0.8	20	

Sulfur Organic Residual M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217420													
L59733-13DUP	DUP	12/01/06 17:00			.22	.22	%				0	20	

Sulfur Pyritic Sulfide M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217420													
L59733-13DUP	DUP	12/01/06 17:00			.07	.05	%				33.3	20	RA

Sulfur Sulfate M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217420													
L59733-13DUP	DUP	12/01/06 17:00			.1	.12	%				18.2	20	

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Inorganic QC Summary

Carbon Resources

ACZ Project ID: ***L59733***

Project ID:

Sulfur Total M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217420													
WG217420PBS	PBS	11/30/06 16:00				U	%		-0.03	0.03			
WG217420LCSS	LCSS	11/30/06 18:30	PCN25383	4.24		4.32	%		80	120			
L59733-13DUP	DUP	12/01/06 17:00			.39	.39	%				0	20	

Total Sulfur Minus Sulfate M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217420													
L59733-13DUP	DUP	12/01/06 17:00			.29	.27	%				7.1	20	

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Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59733***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59733-01	WG217803	Boron, soluble (Hot Water)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217482	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217426	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217420	Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.

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Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59733***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59733-02	WG217803	Boron, soluble (Hot Water)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217482	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217426	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217420	Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.

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Carbon Resources

ACZ Project ID: ***L59733***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59733-03	WG217803	Boron, soluble (Hot Water)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217426	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217420	Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.

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ACZ Project ID: ***L59733***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59733-04	WG217803	Boron, soluble (Hot Water)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217426	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217420	Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.

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ACZ Project ID: ***L59733***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59733-05	WG217803	Boron, soluble (Hot Water)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217426	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217420	Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.

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Carbon Resources

ACZ Project ID: ***L59733***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59733-06	WG217803	Boron, soluble (Hot Water)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217426	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217420	Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.

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ACZ Project ID: ***L59733***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59733-07	WG217803	Boron, soluble (Hot Water)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217426	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217420	Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.

Carbon Resources

ACZ Project ID: ***L59733***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59733-08	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L59733-09	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59733-10	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L59733-11	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59733-12	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59733-13	WG217803	Boron, soluble (Hot Water)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217426	Selenium, soluble (Hot Water)	SM3500-Se.C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217420	Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59733-14	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L59733-15	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59733-16	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L59733-17	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59733-18	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L59733-19	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59733-20	WG217804	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217361	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217349	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217513	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217441	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
			M365.1 - Automated Ascorbic Acid	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.

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Certification Qualifiers

Carbon Resources ACZ Project ID: ***L59733***

Metals Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Selenium, soluble (Hot Water)	SM3500-Se.C

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3
pH, Saturated Paste	USDA No. 60 (21A)
Saturation Percent	USDA No. 60 (2)
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2
Solids, Percent	CLPSOW390, PART F, D-98
Sulfur Forms	M600/2-78-054 3.2.4
Texture by Hydrometer	ASTM D 422 Hydrometer

Wet Chemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid

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Sample Receipt

Carbon Resources

ACZ Project ID: L59733
Date Received: 10/31/2006
Received By:
Date Printed: 10/31/2006

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?			X
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
BUCKET X 8		22.5	16

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Carbon Resources

ACZ Project ID: L59733
Date Received: 10/31/2006
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L59733-01	D-9A 115-145"									X		
L59733-02	D-9B 0-6"									X		
L59733-03	D-9B 6-12"									X		
L59733-04	D-9B 12-30"									X		
L59733-05	D-9B 30-52"									X		
L59733-06	D-9B 52-80"									X		
L59733-07	D-9B 80-102"									X		
L59733-08	D-10 0-5"									X		
L59733-09	D-10 5-11"									X		
L59733-10	D-10 11-23"									X		
L59733-11	D-10 23-35"									X		
L59733-12	D-11 0-12"									X		
L59733-13	D-11 11-48"									X		
L59733-14	D-11 62-82"									X		
L59733-15	D-12 0-6"									X		
L59733-16	D-12 6-14"									X		
L59733-17	D-12 14-28"									X		
L59733-18	D-12 28-48"									X		
L59733-19	D-12 48-66"									X		
L59733-20	2A-1 0-10"									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L59733

Carbon Resources Soil Sample Increments
Kinney Mine, Scofield Utah
Sampled October 14-18, 2006
By Bruce Chesler and Greg Hunt
Telephone 435-826-4961
Billed to Carbon Resources

Mailed UPS on October 24, 2006 to:
ACZ Laboratory
2773 Downhill Drive
Steamboat Springs, Colorado, 80487
Attn. Sue Webber telephone 1-800-334-5493 Ext.110

Soil Samples sent in 5-gallon white plastic buckets from Escalante, Utah, and coal samples sent separately in a bucket from Cedaredege, Colorado. The coal sample increments are required to have the following additional analyses, along with the soil horizons found above and below them in their respective soil positions. These will include soil horizons and coal materials sampled at 3 locations, (D3, D9A, D9B) including a total of 19 samples.

Total Organic Carbon (Combustion Method, Western States Lab Testing Program, 1998, volume 4.10, page 88)
Soluble Selenium reported in mg/kg (Hydric Generation AA-Spectrometry and Flourimetry of water extracted Selenium)
Available Boron reported in mg/kg (saturation extract)
Acid Potential reported % pyric S
Neutralization Potential Tons CaCo3 equivalent/1000 tons

The remaining samples are as follows:

D1 0-6, 6-16, 16-25, 25-40, 40-65, 65-90 (6 samples)

D2 0-6, 6-24 (2 samples)

D3 Coal and Soil sent in separate shipments 0-10, 10-20, 20-40, 40-60, 60-75, 1 coal (7)

D4 0-8, 8-16, (2 samples)

D5 0-6, 6-20, 20-40, 40-60 (4 samples)

D6 0-7, coal not sampled, 24-48, 48-72 (3 samples)

D7 0-6, 6-20, 20-42, 42-58, 58-70 (5 samples)

D8 0-6, 6-13, 13-26, 26-48 (4 samples)

D9A coal and soil sent in two shipments 0-6, 6-12, 12-30, 30-68, 68-95, 95-115, 115-140 (7 samples)

D9B coal and soil sent separately 0-6, 6-12, 12-30, 30-52, 52-80, 80-102 (6 samples)

D10 0-5, 5-11, 11-23, 23-35 (4 samples)

D11 0-12, did not sample coal, 62-82 (2samples)

D12 0-6, 6-14, 14-28, 28-48, 48-66 (5 samples)

2A-1 0-10, 10-24, 24-44, 44-65, 65-80 (5 samples)

2A-2 0-5, 5-14, 14-25, 25-38 (4 samples)

2A-3 0-9, 9-19, 19-36, 36-52 (4 samples)

2A-5 0-6, 6-12, 12-24, 24-48 (4 samples)

2A-6 0-6, 6-12, 12-24, 24-40, 40-66, 66-80 (6 samples)

2A-7 0-7, 7-20, 20-38 (3 samples)

2B-1 0-9, 9-19, 19-33, 33-51 (4 samples)

1A-1 0-6, 6-17, 17-28, 28-60, 60-100 (5 samples)

1A-2 15-25, 25-40, 40-60, 60-75, 75-90 (5 samples)

1B1 0-7, 7-15, 15-28, 28-60 (4 samples)

Please give me a call if you have any questions on methodology at my office. Phone # 435-826-4961

Thanks,
Bruce Chesler
Representing, Carbon Resources
Escalante, Utah

LBC 10.26.06

Sue Webber

From: GHuntBBC@aol.com
Sent: Friday, October 27, 2006 12:52 PM
To: bches@scinternet.net; Sue Webber
Subject: Sue Weber Carbon Resources Soil Samples

FROM: **Geo-Hunt Consulting**
16577 Columbine Lane
Cedaredge, CO 81413
970-856-9477

TO: **Sue Webber, Project Manager**
ACZ Laboratories, Inc.
2773 Downhill Drive,
Steamboat Springs, Co 80487

RE: **TRANSMITTAL OF SOIL SAMPLES**

Dear Sue:
You have already received a rather large number of samples from BRUCE CHESLER, soil scientist from Escalante Utah, from the Carbon Resources "Kinney" Property, Scofield Utah. Enclosed please find the following seven soil samples taken from the same property and are a part of the same project. These samples should be processed with those received directly from Bruce and all of the results should be returned to Bruce.

D3
D4 19"-72"
D9-A 12"- 30"
D9-A 30"- 68"
D9-B 12"- 30"
D9-B 30"- 50"
D11 11"-48"

Note that some of the bag samples received from Bruce and or I may be labeled either Carbon Resources or Kinney. Both names indicate the same project.

Thank you for your prompt attention to this project.

Greg Hunt

Cc: Bruce Chesler

10/31/2006

Very Fine Sand

analyst: as
date: 12-12-06

ACZ L#	Total sample wt. gms	% <2000um sieve	Wt. of sxs used for Texture gms	Wt. of sxs between 105um & 53um gm.	% VFS
L59733-01	472.47	81.5	40.0	9.3	**18.9**
L59733-02	398.08	82.3	40.0	7.3	**15.0**
L59733-03	421.36	88.2	40.0	8.8	**19.4**
L59733-04	612.70	47.2	40.0	3.1	**3.7**
L59733-05	303.22	72.1	40.0	1.6	**2.9**
L59733-06	461.95	82.7	40.0	10.4	**21.5**
L59733-07	376.62	82.7	40.0	9.8	**20.3**
L59733-08	378.34	81.6	40.0	15.6	**31.8**
L59733-09	452.80	47.4	40.0	7.5	**8.9**
L59733-10	685.40	23.0	40.0	5.2	**3.0**
L59733-11	562.02	18.9	40.0	4.3	**2.0**
L59733-12	469.62	57.9	40.0	8.1	**11.7**
L59733-13	513.03	65.8	40.0	4.2	**6.9**
L59733-14	503.22	32.8	40.0	7.7	**6.3**
L59733-15	269.96	91.0	40.0	10.3	**23.4**
L59733-16	228.31	84.0	40.0	10.8	**22.7**
L59733-17	401.90	69.5	40.0	10.8	**18.8**
L59733-18	323.45	67.4	40.0	10.2	**17.2**
L59733-19	369.49	84.4	40.0	11.2	**23.6**
L59733-20	252.39	91.8	40.0	10.6	**24.3**
dup L59733-01	472.47	81.5	40	9.0	**18.3**

(wt of sxs between 105um & 53um) / (wt. of sxs used for texture) = VFS of texture

(VFS of Texture) x (% <2000um) = % VFS

additional data from:

-sieve2000 WG217205

-sieve53 WG217644

-texture WG217692

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

December 21, 2006

Report to:
Clay Wisdom
Carbon Resources
PO Box 1789
Albuquerque, NM 87192

Bill to:
Clay Wisdom
Carbon Resources
PO Box 11789
Albuquerque, NM 87192

cc: Greg Hunt, Bruce Chesler

Project ID:
ACZ Project ID: L59734

Clay Wisdom:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 31, 2006. This project has been assigned to ACZ's project number, L59734. Please reference this number in all future inquiries.

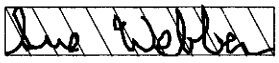
All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L59734. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after January 21, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

If you have any questions or other needs, please contact your Project Manager.



21/Dec/06

Sue Webber, Project Manager, has reviewed and approved this report in its entirety.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 8048: (800) 334-5493

Case Narrative

Carbon Resources

December 21, 2006

Project ID:
ACZ Project ID: L59734

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 20 soil samples from Carbon Resources on October 31, 2006. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L59734. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were not performed within EPA recommended holding times. The EPA holding times apply to water samples, not soil so the "H" flags are not applicable.

Sample Analysis

These samples were analyzed for inorganic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The following anomalies required further explanation not provided by the Extended Qualifier Report:

1. For Nitrate/Nitrite, extractable values flagged with an "N1", the Prep Blank (PBS) was detected above the MDL. The data was flagged and accepted since this is considered typical procedural contamination.

2. For Phosphorus, extractable values flagged with an "N1", the Prep Blank (PBS) was detected above the MDL. The data was flagged and accepted since this is considered typical procedural contamination.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-1 10-24"

ACZ Sample ID: ***L59734-01***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 18:50	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.33		*	meq/L	0.01	0.05	12/07/06 1:57	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.51		*	meq/L	0.02	0.08	12/07/06 1:57	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	220		*	mg/Kg	20	50	12/10/06 2:54	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.337		*	meq/L	0.008	0.03	12/07/06 1:57	gme
Sodium Absorption Ratio	Calculation	0.37				0.03	0.15	12/21/06 10:41	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.36		*	meq/L	0.01	0.04	12/07/06 1:57	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.4	B	*	%	0.1	0.5	12/07/06 12:20	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.287		*	mmhos/cm	0.001	0.01	12/04/06 12:00	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.5		*	%	0.1	0.5	12/05/06 9:50	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.7		*	units	0.1	0.1	12/04/06 12:00	lwt/srs
Saturation Percent	USDA No. 60 (2)	34.60		*	%	0.01	0.1	12/04/06 12:00	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	84.6		*	% Passing	0.1	0.5	12/13/06 8:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	72.0		*	% Passing	0.1	0.5	11/28/06 8:00	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	94.6		*	%	0.1	0.5	11/28/06 13:57	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		20.0		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Sand		50.0		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Silt		30.0		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Texture Classification		L		*				12/12/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-1 10-24"

ACZ Sample ID: ***L59734-01***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/04/06 18:08	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:00	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 11:14	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:00	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 10:00	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	7.4			mg/Kg	0.2	1	12/21/06 10:41	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	8.0	H	*	mg/Kg	0.2	1	12/08/06 21:42	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.6	H	*	mg/Kg	0.1	0.5	12/08/06 21:42	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.066	H	*	%	0.007	0.04	11/18/06 22:50	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	39	H	*	mg/Kg	1	5	12/09/06 17:26	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-1 24-44"

ACZ Sample ID: ***L59734-02***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 19:07	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.26		*	meq/L	0.01	0.05	12/07/06 2:01	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.25		*	meq/L	0.02	0.08	12/07/06 2:01	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	120		*	mg/Kg	20	50	12/10/06 3:02	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.061		*	meq/L	0.008	0.03	12/07/06 2:01	gme
Sodium Absorption Ratio	Calculation	0.20				0.03	0.15	12/21/06 10:42	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.18		*	meq/L	0.01	0.04	12/07/06 2:01	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.4	B	*	%	0.1	0.5	12/07/06 15:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.190		*	mmhos/cm	0.001	0.01	12/04/06 14:15	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	8.1		*	%	0.1	0.5	12/11/06 9:00	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.5		*	units	0.1	0.1	12/04/06 14:15	lwt/srs
Saturation Percent	USDA No. 60 (2)	44.30		*	%	0.01	0.1	12/04/06 14:15	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	86.1		*	% Passing	0.1	0.5	12/13/06 9:21	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	83.9		*	% Passing	0.1	0.5	11/28/06 9:44	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	94.2		*	%	0.1	0.5	11/28/06 14:55	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		27.5		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Sand		35.0		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Silt		37.5		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Texture Classification		CL		*				12/12/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-1 24-44"

ACZ Sample ID: ***L59734-02***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/04/06 20:25	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:03	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 11:42	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:03	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 10:06	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	34			mg/Kg	1	5	12/21/06 10:42	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	35	H	*	mg/Kg	1	5	12/08/06 22:29	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 21:45	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.048	H	*	%	0.002	0.01	11/18/06 21:15	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	17	H	*	mg/Kg	1	5	12/09/06 17:29	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-1 44-65"

ACZ Sample ID: ***L59734-03***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 19:42	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.37		*	meq/L	0.01	0.05	12/07/06 2:05	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.29		*	meq/L	0.02	0.08	12/07/06 2:05	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	90		*	mg/Kg	20	50	12/10/06 3:14	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.084		*	meq/L	0.008	0.03	12/07/06 2:05	gme
Sodium Absorption Ratio	Calculation	0.39				0.03	0.15	12/21/06 10:42	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.36		*	meq/L	0.01	0.04	12/07/06 2:05	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.2	B	*	%	0.1	0.5	12/07/06 16:20	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.237		*	mmhos/cm	0.001	0.01	12/04/06 16:30	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	12.2		*	%	0.1	0.5	12/12/06 2:20	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.7		*	units	0.1	0.1	12/04/06 16:30	lwt/srs
Saturation Percent	USDA No. 60 (2)	40.60		*	%	0.01	0.1	12/04/06 16:30	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	87.7		*	% Passing	0.1	0.5	12/13/06 10:42	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	90.6		*	% Passing	0.1	0.5	11/28/06 11:28	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	95.0		*	%	0.1	0.5	11/28/06 15:53	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		26.3		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Sand		42.5		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Silt		31.3		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Texture Classification		L		*				12/12/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-1 44-65"

ACZ Sample ID: ***L59734-03***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/04/06 21:34	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:06	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 11:57	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:06	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 10:12	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	7.6			mg/Kg	0.2	1	12/21/06 10:42	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	8.4	H	*	mg/Kg	0.2	1	12/08/06 21:47	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	12/08/06 21:47	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.024	H	*	%	0.002	0.01	11/18/06 22:29	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	8	H	*	mg/Kg	1	5	12/09/06 17:30	pjb

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-1 65-80"

ACZ Sample ID: ***L59734-04***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 19:51	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.51		*	meq/L	0.01	0.05	12/07/06 2:09	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.34		*	meq/L	0.02	0.08	12/07/06 2:09	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	60		*	mg/Kg	20	50	12/10/06 3:30	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.075		*	meq/L	0.008	0.03	12/07/06 2:09	gme
Sodium Absorption Ratio	Calculation	0.41				0.03	0.15	12/21/06 10:42	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.40		*	meq/L	0.01	0.04	12/07/06 2:09	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.2	B	*	%	0.1	0.5	12/07/06 17:40	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.241		*	mmhos/cm	0.001	0.01	12/04/06 18:45	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	14.8		*	%	0.1	0.5	12/12/06 11:00	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.8		*	units	0.1	0.1	12/04/06 18:45	lwt/srs
Saturation Percent	USDA No. 60 (2)	34.30		*	%	0.01	0.1	12/04/06 18:45	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	86.5		*	% Passing	0.1	0.5	12/13/06 12:03	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	90.1		*	% Passing	0.1	0.5	11/28/06 13:12	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	95.1		*	%	0.1	0.5	11/28/06 16:51	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		20.0		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Sand		55.0		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Silt		25.0		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Texture Classification		L		*				12/12/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-1 65-80"

ACZ Sample ID: ***L59734-04***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/04/06 22:42	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:09	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 12:11	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:09	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 10:18	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	6.4			mg/Kg	0.2	1	12/21/06 10:42	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	7.1	H	*	mg/Kg	0.2	1	12/08/06 21:49	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 21:49	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.028	H	*	%	0.002	0.01	11/18/06 22:31	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	9	H	*	mg/Kg	1	5	12/09/06 17:32	pjb

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-2 0-5"

ACZ Sample ID: ***L59734-05***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 19:59	jtf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.47		*	meq/L	0.01	0.05	12/07/06 2:13	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.46		*	meq/L	0.02	0.08	12/07/06 2:13	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	290		*	mg/Kg	20	50	12/10/06 3:34	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.491		*	meq/L	0.008	0.03	12/07/06 2:13	gme
Sodium Absorption Ratio	Calculation	0.33				0.03	0.15	12/21/06 10:42	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.33		*	meq/L	0.01	0.04	12/07/06 2:13	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.8		*	%	0.1	0.5	12/07/06 19:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.305		*	mmhos/cm	0.001	0.01	12/04/06 21:00	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.8		*	%	0.1	0.5	12/05/06 10:41	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.0		*	units	0.1	0.1	12/04/06 21:00	lwt/srs
Saturation Percent	USDA No. 60 (2)	44.30		*	%	0.01	0.1	12/04/06 21:00	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	80.5		*	% Passing	0.1	0.5	12/13/06 13:25	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	88.9		*	% Passing	0.1	0.5	11/28/06 14:56	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	87.3		*	%	0.1	0.5	11/28/06 17:49	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		16.3		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Sand		47.5		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Silt		36.3		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Texture Classification		L		*				12/12/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-2 0-5"

ACZ Sample ID: ***L59734-05***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/04/06 23:51	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:12	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 12:25	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:12	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 10:25	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	5.2			mg/Kg	0.2	1	12/21/06 10:42	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	6.0	H	*	mg/Kg	0.2	1	12/08/06 21:50	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	12/08/06 21:50	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.072	H	*	%	0.002	0.01	11/18/06 22:32	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	17	H	*	mg/Kg	1	5	12/09/06 17:33	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-2 5-14"

ACZ Sample ID: ***L59734-06***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 20:08	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.49		*	meq/L	0.01	0.05	12/07/06 2:17	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.44		*	meq/L	0.02	0.08	12/07/06 2:17	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	450		*	mg/Kg	20	50	12/10/06 3:38	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.906		*	meq/L	0.008	0.03	12/07/06 2:17	gme
Sodium Absorption Ratio	Calculation	0.33				0.03	0.15	12/21/06 10:42	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.33		*	meq/L	0.01	0.04	12/07/06 2:17	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.4		*	%	0.1	0.5	12/07/06 20:20	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.320		*	mmhos/cm	0.001	0.01	12/04/06 23:15	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.6		*	%	0.1	0.5	12/05/06 11:06	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.0		*	units	0.1	0.1	12/04/06 23:15	lwt/srs
Saturation Percent	USDA No. 60 (2)	45.20		*	%	0.01	0.1	12/04/06 23:15	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	78.0		*	% Passing	0.1	0.5	12/13/06 14:46	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	88.5		*	% Passing	0.1	0.5	11/28/06 16:41	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	86.3		*	%	0.1	0.5	11/28/06 18:47	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		15.0		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Sand		48.8		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Silt		36.3		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Texture Classification		L		*				12/12/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-2 5-14"

ACZ Sample ID: ***L59734-06***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 0:59	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:15	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 12:39	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:15	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 10:31	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	7.0			mg/Kg	0.2	1	12/21/06 10:42	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	7.8	H	*	mg/Kg	0.2	1	12/08/06 21:51	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	12/08/06 21:51	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.22	H	*	%	0.05	0.2	12/14/06 15:13	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	27	H	*	mg/Kg	1	5	12/09/06 17:34	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-2 14-25"

ACZ Sample ID: ***L59734-07***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 20:16	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.65		*	meq/L	0.01	0.05	12/07/06 2:21	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.23		*	meq/L	0.02	0.08	12/07/06 2:21	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	210		*	mg/Kg	20	50	12/10/06 3:42	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.195		*	meq/L	0.008	0.03	12/07/06 2:21	gme
Sodium Absorption Ratio	Calculation	0.43				0.03	0.15	12/21/06 10:42	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.29		*	meq/L	0.01	0.04	12/07/06 2:21	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.5		*	%	0.1	0.5	12/07/06 21:40	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.155		*	mmhos/cm	0.001	0.01	12/05/06 1:30	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.5		*	%	0.1	0.5	12/05/06 11:31	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.9		*	units	0.1	0.1	12/05/06 1:30	lwt/srs
Saturation Percent	USDA No. 60 (2)	32.30		*	%	0.01	0.1	12/05/06 1:30	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	87.0		*	% Passing	0.1	0.5	12/13/06 16:07	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	64.5		*	% Passing	0.1	0.5	11/28/06 18:25	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	96.3		*	%	0.1	0.5	11/28/06 19:44	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		18.8		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Sand		35.0		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Silt		46.3		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Texture Classification		SiL		*				12/12/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-2 14-25"

ACZ Sample ID: ***L59734-07***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 2:08	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:18	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 12:54	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:18	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 10:37	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	47.0			mg/Kg	0.4	2	12/21/06 10:42	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	47.7	H	*	mg/Kg	0.4	2	12/08/06 22:32	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 21:56	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.043	H	*	%	0.002	0.01	11/18/06 22:34	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	17	H	*	mg/Kg	1	5	12/09/06 17:37	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-2 25-38"

ACZ Sample ID: ***L59734-08***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 20:25	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.47		*	meq/L	0.01	0.05	12/07/06 2:34	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.23		*	meq/L	0.02	0.08	12/07/06 2:34	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	160		*	mg/Kg	20	50	12/10/06 3:46	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.124		*	meq/L	0.008	0.03	12/07/06 2:34	gme
Sodium Absorption Ratio	Calculation	0.37				0.03	0.15	12/21/06 10:42	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.22		*	meq/L	0.01	0.04	12/07/06 2:34	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.2	B	*	%	0.1	0.5	12/07/06 23:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.121		*	mmhos/cm	0.001	0.01	12/05/06 3:45	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.7		*	%	0.1	0.5	12/05/06 11:56	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.9		*	units	0.1	0.1	12/05/06 3:45	lwt/srs
Saturation Percent	USDA No. 60 (2)	37.80		*	%	0.01	0.1	12/05/06 3:45	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	84.4		*	% Passing	0.1	0.5	12/13/06 17:29	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	70.7		*	% Passing	0.1	0.5	11/28/06 20:09	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	94.1		*	%	0.1	0.5	11/28/06 20:42	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		26.3		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Sand		37.5		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Silt		36.3		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Texture Classification		SiL		*				12/12/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-2 25-38"

ACZ Sample ID: ***L59734-08***
Date Sampled: *10/14/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 3:17	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:22	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 13:08	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:21	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 10:44	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	41.8			mg/Kg	0.4	2	12/21/06 10:42	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	42.5	H	*	mg/Kg	0.4	2	12/08/06 22:33	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 21:57	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.045	H	*	%	0.005	0.02	11/18/06 22:52	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	10	H	*	mg/Kg	1	5	12/09/06 17:38	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-3 0-9"

ACZ Sample ID: ***L59734-09***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 20:34	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.90		*	meq/L	0.01	0.05	12/07/06 2:38	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.28		*	meq/L	0.02	0.08	12/07/06 2:38	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	320		*	mg/Kg	20	50	12/10/06 3:50	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.535		*	meq/L	0.008	0.03	12/07/06 2:38	gme
Sodium Absorption Ratio	Calculation	0.23				0.03	0.15	12/21/06 10:42	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.18		*	meq/L	0.01	0.04	12/07/06 2:38	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.7		*	%	0.1	0.5	12/08/06 0:20	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.200		*	mmhos/cm	0.001	0.01	12/05/06 6:00	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.6		*	%	0.1	0.5	12/05/06 12:22	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.7		*	units	0.1	0.1	12/05/06 6:00	lwt/srs
Saturation Percent	USDA No. 60 (2)	45.50		*	%	0.01	0.1	12/05/06 6:00	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	72.8		*	% Passing	0.1	0.5	12/13/06 18:50	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	86.8		*	% Passing	0.1	0.5	11/28/06 21:53	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	87.7		*	%	0.1	0.5	11/28/06 21:40	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		11.3		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Sand		56.3		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Silt		32.5		*	%	0.1	0.5	12/12/06 0:00	lwt/srs
Texture Classification		L		*				12/12/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-3 0-9"

ACZ Sample ID: ***L59734-09***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 4:25	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:25	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 13:22	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:24	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 10:50	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	9.7			mg/Kg	0.2	1	12/21/06 10:42	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	9.7	H	*	mg/Kg	0.2	1	12/08/06 21:58	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	12/13/06 19:25	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.074	H	*	%	0.002	0.01	11/18/06 22:36	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	14	H	*	mg/Kg	1	5	12/09/06 17:39	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-3 9-19"

ACZ Sample ID: ***L59734-10***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							11/15/06 20:42	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.47		*	meq/L	0.01	0.05	12/07/06 2:42	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.23		*	meq/L	0.02	0.08	12/07/06 2:42	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	240		*	mg/Kg	20	50	12/10/06 3:54	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.205		*	meq/L	0.008	0.03	12/07/06 2:42	gme
Sodium Absorption Ratio	Calculation	0.33				0.03	0.15	12/21/06 10:42	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.20		*	meq/L	0.01	0.04	12/07/06 2:42	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.7		*	%	0.1	0.5	12/08/06 1:40	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.137		*	mmhos/cm	0.001	0.01	12/05/06 8:15	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.5	B	*	%	0.1	0.5	12/05/06 12:47	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.8		*	units	0.1	0.1	12/05/06 8:15	lwt/srs
Saturation Percent	USDA No. 60 (2)	33.60		*	%	0.01	0.1	12/05/06 8:15	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	82.1		*	% Passing	0.1	0.5	12/13/06 20:11	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	80.7		*	% Passing	0.1	0.5	11/28/06 23:37	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	94.5		*	%	0.1	0.5	11/28/06 22:38	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		21.3		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Sand		45.0		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Silt		33.8		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Texture Classification		L		*				12/13/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-3 9-19"

ACZ Sample ID: ***L59734-10***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 5:34	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:28	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 13:37	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:27	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 10:56	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	5.1			mg/Kg	0.2	1	12/21/06 10:42	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	5.8	H	*	mg/Kg	0.2	1	12/08/06 22:00	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 22:00	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.139	H	*	%	0.005	0.02	11/18/06 22:55	pjb
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	9	H	*	mg/Kg	1	5	12/09/06 17:40	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-3 19-36"

ACZ Sample ID: ***L59734-11***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/01/06 16:09	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.54		*	meq/L	0.01	0.05	12/07/06 2:46	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.19		*	meq/L	0.02	0.08	12/07/06 2:46	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	110		*	mg/Kg	20	50	12/10/06 3:58	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.111		*	meq/L	0.008	0.03	12/07/06 2:46	gme
Sodium Absorption Ratio	Calculation	0.41				0.03	0.15	12/21/06 10:43	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.25		*	meq/L	0.01	0.04	12/07/06 2:46	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.5		*	%	0.1	0.5	12/08/06 3:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.139		*	mmhos/cm	0.001	0.01	12/05/06 10:30	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.5		*	%	0.1	0.5	12/05/06 13:12	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.7		*	units	0.1	0.1	12/05/06 10:30	lwt/srs
Saturation Percent	USDA No. 60 (2)	32.00		*	%	0.01	0.1	12/05/06 10:30	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	80.6		*	% Passing	0.1	0.5	12/13/06 21:33	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	75.3		*	% Passing	0.1	0.5	11/29/06 1:22	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	94.7		*	%	0.1	0.5	11/28/06 23:36	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		22.5		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Sand		47.5		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Silt		30.0		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Texture Classification		L		*				12/13/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-3 19-36"

ACZ Sample ID: ***L59734-11***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 6:42	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:31	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 13:51	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:30	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 11:03	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	4.1			mg/Kg	0.2	1	12/21/06 10:43	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.8	H	*	mg/Kg	0.2	1	12/08/06 22:01	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 22:01	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.010	H	*	%	0.002	0.008	12/04/06 13:33	jlf
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	9	H	*	mg/Kg	1	5	12/09/06 17:42	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-3 36-52"

ACZ Sample ID: ***L59734-12***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/01/06 17:04	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.08		*	meq/L	0.01	0.05	12/07/06 2:50	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.31		*	meq/L	0.02	0.08	12/07/06 2:50	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	130		*	mg/Kg	20	50	12/10/06 4:02	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.073		*	meq/L	0.008	0.03	12/07/06 2:50	gme
Sodium Absorption Ratio	Calculation	0.33				0.03	0.15	12/21/06 10:43	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.28		*	meq/L	0.01	0.04	12/07/06 2:50	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.5		*	%	0.1	0.5	12/08/06 4:20	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.192		*	mmhos/cm	0.001	0.01	12/05/06 12:45	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.8		*	%	0.1	0.5	12/05/06 13:37	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.2		*	units	0.1	0.1	12/05/06 12:45	lwt/srs
Saturation Percent	USDA No. 60 (2)	42.60		*	%	0.01	0.1	12/05/06 12:45	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	91.0		*	% Passing	0.1	0.5	12/13/06 22:54	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	61.3		*	% Passing	0.1	0.5	11/29/06 3:06	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	93.5		*	%	0.1	0.5	11/29/06 0:34	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		28.8		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Sand		31.3		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Silt		40.0		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Texture Classification		SiL		*				12/13/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-3 36-52"

ACZ Sample ID: ***L59734-12***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 7:51	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:34	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 14:05	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:33	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 11:09	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	11.1			mg/Kg	0.2	1	12/21/06 10:43	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	11.8	H	*	mg/Kg	0.2	1	12/08/06 22:02	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 22:02	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.042	H	*	%	0.002	0.01	12/04/06 13:35	jlf
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	33	H	*	mg/Kg	1	5	12/09/06 17:43	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-5 0-6"

ACZ Sample ID: ***L59734-13***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/01/06 17:58	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.87		*	meq/L	0.01	0.05	12/07/06 2:54	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.52		*	meq/L	0.02	0.08	12/07/06 2:54	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	340		*	mg/Kg	20	50	12/10/06 4:14	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.675		*	meq/L	0.008	0.03	12/07/06 2:54	gme
Sodium Absorption Ratio	Calculation	0.38				0.03	0.15	12/21/06 10:43	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.42		*	meq/L	0.01	0.04	12/07/06 2:54	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.8		*	%	0.1	0.5	12/08/06 5:40	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.362		*	mmhos/cm	0.001	0.01	12/05/06 15:00	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.8		*	%	0.1	0.5	12/05/06 14:03	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.8		*	units	0.1	0.1	12/05/06 15:00	lwt/srs
Saturation Percent	USDA No. 60 (2)	44.70		*	%	0.01	0.1	12/05/06 15:00	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	80.6		*	% Passing	0.1	0.5	12/14/06 0:15	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	80.4		*	% Passing	0.1	0.5	11/29/06 4:50	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	87.1		*	%	0.1	0.5	11/29/06 1:32	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		16.3		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Sand		46.3		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Silt		37.5		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Texture Classification		L		*				12/13/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-5 0-6"

ACZ Sample ID: ***L59734-13***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 8:59	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:37	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 14:19	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:36	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 11:15	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	11.4			mg/Kg	0.2	1	12/21/06 10:43	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	11.4	H	*	mg/Kg	0.2	1	12/08/06 22:03	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction		UH	*	mg/Kg	0.1	0.5	12/13/06 19:27	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.184	H	*	%	0.007	0.04	12/14/06 15:14	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	25	H	*	mg/Kg	1	5	12/09/06 17:44	pjb

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-5 6-12"

ACZ Sample ID: ***L59734-14***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/01/06 18:26	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	2.15		*	meq/L	0.01	0.05	12/07/06 2:58	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.42		*	meq/L	0.02	0.08	12/07/06 2:58	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	350		*	mg/Kg	20	50	12/10/06 4:17	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.543		*	meq/L	0.008	0.03	12/07/06 2:58	gme
Sodium Absorption Ratio	Calculation	0.33				0.03	0.15	12/21/06 10:43	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.38		*	meq/L	0.01	0.04	12/07/06 2:58	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.4		*	%	0.1	0.5	12/08/06 7:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.358		*	mmhos/cm	0.001	0.01	12/05/06 17:15	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.7		*	%	0.1	0.5	12/05/06 14:28	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.0		*	units	0.1	0.1	12/05/06 17:15	lwt/srs
Saturation Percent	USDA No. 60 (2)	39.60		*	%	0.01	0.1	12/05/06 17:15	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	87.5		*	% Passing	0.1	0.5	12/14/06 1:37	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	60.5		*	% Passing	0.1	0.5	11/29/06 6:34	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	89.0		*	%	0.1	0.5	11/29/06 2:29	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		21.3		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Sand		46.3		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Silt		32.5		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Texture Classification		L		*				12/13/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-5 6-12"

ACZ Sample ID: ***L59734-14***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 10:08	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:40	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 14:34	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:39	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 11:22	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	6.5			mg/Kg	0.2	1	12/21/06 10:43	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	7.1	H	*	mg/Kg	0.2	1	12/08/06 22:05	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.6	H	*	mg/Kg	0.1	0.5	12/08/06 22:05	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.108	H	*	%	0.002	0.01	12/04/06 13:38	jlf
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	14	H	*	mg/Kg	1	5	12/09/06 17:45	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-5 12-24"

ACZ Sample ID: ***L59734-15***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/01/06 18:53	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.37		*	meq/L	0.01	0.05	12/07/06 3:02	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.24		*	meq/L	0.02	0.08	12/07/06 3:02	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	240		*	mg/Kg	20	50	12/10/06 4:21	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.256		*	meq/L	0.008	0.03	12/07/06 3:02	gme
Sodium Absorption Ratio	Calculation	0.38				0.03	0.15	12/21/06 10:43	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.21		*	meq/L	0.01	0.04	12/07/06 3:02	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.5		*	%	0.1	0.5	12/08/06 8:20	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.107		*	mmhos/cm	0.001	0.01	12/05/06 19:30	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.5	B	*	%	0.1	0.5	12/05/06 14:53	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.0		*	units	0.1	0.1	12/05/06 19:30	lwt/srs
Saturation Percent	USDA No. 60 (2)	39.20		*	%	0.01	0.1	12/05/06 19:30	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	92.8		*	% Passing	0.1	0.5	12/14/06 2:58	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	45.0		*	% Passing	0.1	0.5	11/29/06 8:19	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	91.7		*	%	0.1	0.5	11/29/06 3:27	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		31.3		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Sand		28.8		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Silt		40.0		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Texture Classification		SiCL		*				12/13/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-5 12-24"

ACZ Sample ID: ***L59734-15***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 11:17	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:44	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 14:48	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:42	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 11:28	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	4.2			mg/Kg	0.2	1	12/21/06 10:43	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.9	H	*	mg/Kg	0.2	1	12/08/06 22:06	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 22:06	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.062	H	*	%	0.002	0.009	12/04/06 13:40	jlf
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	7	H	*	mg/Kg	1	5	12/09/06 17:46	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-5 24-48"

ACZ Sample ID: ***L59734-16***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/01/06 19:21	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.24		*	meq/L	0.01	0.05	12/07/06 3:06	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.31		*	meq/L	0.02	0.08	12/07/06 3:06	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	240		*	mg/Kg	20	50	12/10/06 4:25	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.252		*	meq/L	0.008	0.03	12/07/06 3:06	gme
Sodium Absorption Ratio	Calculation	0.42				0.03	0.15	12/21/06 10:43	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.22		*	meq/L	0.01	0.04	12/07/06 3:06	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.4	B	*	%	0.1	0.5	12/08/06 9:40	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.092		*	mmhos/cm	0.001	0.01	12/05/06 21:45	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.7		*	%	0.1	0.5	12/05/06 15:19	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.0		*	units	0.1	0.1	12/05/06 21:45	lwt/srs
Saturation Percent	USDA No. 60 (2)	47.30		*	%	0.01	0.1	12/05/06 21:45	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	95.2		*	% Passing	0.1	0.5	12/14/06 4:19	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	39.3		*	% Passing	0.1	0.5	11/29/06 10:03	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	90.7		*	%	0.1	0.5	11/29/06 4:25	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		40.0		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Sand		22.5		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Silt		37.5		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Texture Classification		SiC/SiCL		*				12/13/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-5 24-48"

ACZ Sample ID: ***L59734-16***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 12:25	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:47	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 15:02	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:45	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 11:34	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	7.0			mg/Kg	0.2	1	12/21/06 10:43	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	7.7	H	*	mg/Kg	0.2	1	12/08/06 22:07	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 22:07	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.049	H	*	%	0.001	0.006	12/04/06 13:41	jlf
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	8	H	*	mg/Kg	1	5	12/09/06 17:47	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-6 0-6"

ACZ Sample ID: ***L59734-17***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/01/06 20:43	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.14		*	meq/L	0.01	0.05	12/07/06 3:10	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.43		*	meq/L	0.02	0.08	12/07/06 3:10	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	410		*	mg/Kg	20	50	12/10/06 4:29	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.748		*	meq/L	0.008	0.03	12/07/06 3:10	gme
Sodium Absorption Ratio	Calculation	0.16				0.03	0.15	12/21/06 10:43	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.15		*	meq/L	0.01	0.04	12/07/06 3:10	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.2		*	%	0.1	0.5	12/08/06 11:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.231		*	mmhos/cm	0.001	0.01	12/06/06 0:00	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.7		*	%	0.1	0.5	12/05/06 15:44	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.0		*	units	0.1	0.1	12/06/06 0:00	lwt/srs
Saturation Percent	USDA No. 60 (2)	40.90		*	%	0.01	0.1	12/06/06 0:00	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	80.3		*	% Passing	0.1	0.5	12/14/06 5:41	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	91.3		*	% Passing	0.1	0.5	11/29/06 11:47	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	84.3		*	%	0.1	0.5	11/29/06 5:23	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		15.0		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Sand		47.5		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Silt		37.5		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Texture Classification		L		*				12/13/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-6 0-6"

ACZ Sample ID: ***L59734-17***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 13:34	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:50	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 15:17	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:48	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 11:41	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	7.2			mg/Kg	0.2	1	12/21/06 10:43	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	7.9	H	*	mg/Kg	0.2	1	12/08/06 22:12	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 22:12	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.159	H	*	%	0.007	0.03	12/14/06 15:15	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	24	H	*	mg/Kg	1	5	12/09/06 17:50	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-6 6-12"

ACZ Sample ID: ***L59734-18***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/01/06 21:10	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.84		*	meq/L	0.01	0.05	12/07/06 3:22	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.31		*	meq/L	0.02	0.08	12/07/06 3:22	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	410		*	mg/Kg	20	50	12/10/06 4:33	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.515		*	meq/L	0.008	0.03	12/07/06 3:22	gme
Sodium Absorption Ratio	Calculation	0.21				0.03	0.15	12/21/06 10:44	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.16		*	meq/L	0.01	0.04	12/07/06 3:22	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.3		*	%	0.1	0.5	12/08/06 12:20	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.189		*	mmhos/cm	0.001	0.01	12/06/06 2:15	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.7		*	%	0.1	0.5	12/05/06 16:09	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.0		*	units	0.1	0.1	12/06/06 2:15	lwt/srs
Saturation Percent	USDA No. 60 (2)	38.80		*	%	0.01	0.1	12/06/06 2:15	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	80.8		*	% Passing	0.1	0.5	12/14/06 7:02	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	83.6		*	% Passing	0.1	0.5	11/29/06 13:31	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	90.4		*	%	0.1	0.5	11/29/06 6:21	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		16.3		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Sand		50.0		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Silt		33.8		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Texture Classification		L		*				12/13/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-6 6-12"

ACZ Sample ID: ***L59734-18***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 14:42	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:53	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 15:31	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:51	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 11:47	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	5.3			mg/Kg	0.2	1	12/21/06 10:44	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	6.0	H	*	mg/Kg	0.2	1	12/08/06 22:13	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 22:13	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.134	H	*	%	0.007	0.04	12/14/06 15:16	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	22	H	*	mg/Kg	1	5	12/09/06 17:52	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-6 12-24"

ACZ Sample ID: ***L59734-19***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/01/06 21:37	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.96		*	meq/L	0.01	0.05	12/07/06 3:26	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.31		*	meq/L	0.02	0.08	12/07/06 3:26	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	160		*	mg/Kg	20	50	12/10/06 4:37	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.101		*	meq/L	0.008	0.03	12/07/06 3:26	gme
Sodium Absorption Ratio	Calculation	0.43				0.03	0.15	12/21/06 10:44	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.35		*	meq/L	0.01	0.04	12/07/06 3:26	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.0		*	%	0.1	0.5	12/08/06 13:40	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.180		*	mmhos/cm	0.001	0.01	12/06/06 4:30	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.7		*	%	0.1	0.5	12/05/06 16:34	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.2		*	units	0.1	0.1	12/06/06 4:30	lwt/srs
Saturation Percent	USDA No. 60 (2)	39.20		*	%	0.01	0.1	12/06/06 4:30	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	82.0		*	% Passing	0.1	0.5	12/14/06 8:23	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	86.8		*	% Passing	0.1	0.5	11/29/06 15:15	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	96.0		*	%	0.1	0.5	11/29/06 7:19	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		16.3		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Sand		45.0		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Silt		38.8		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Texture Classification		L		*				12/13/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-6 12-24"

ACZ Sample ID: ***L59734-19***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 15:51	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:56	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 15:45	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:54	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 11:53	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	3.5			mg/Kg	0.2	1	12/21/06 10:44	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.1	H	*	mg/Kg	0.2	1	12/08/06 22:14	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.6	H	*	mg/Kg	0.1	0.5	12/08/06 22:14	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.10	H	*	%	0.02	0.09	12/14/06 15:17	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	19	H	*	mg/Kg	1	5	12/09/06 17:53	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-6 24-40"

ACZ Sample ID: ***L59734-20***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/01/06 22:05	jlf/pjb

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.27		*	meq/L	0.01	0.05	12/07/06 3:30	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.44		*	meq/L	0.02	0.08	12/07/06 3:30	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	230		*	mg/Kg	20	50	12/10/06 4:41	gme
Potassium, soluble (Sat. Paste)	M6010B ICP	0.235		*	meq/L	0.008	0.03	12/07/06 3:30	gme
Sodium Absorption Ratio	Calculation	0.42				0.03	0.15	12/21/06 10:44	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.39		*	meq/L	0.01	0.04	12/07/06 3:30	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.0		*	%	0.1	0.5	12/08/06 15:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.216		*	mmhos/cm	0.001	0.01	12/06/06 6:45	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.7		*	%	0.1	0.5	12/05/06 17:00	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.0		*	units	0.1	0.1	12/06/06 6:45	lwt/srs
Saturation Percent	USDA No. 60 (2)	42.80		*	%	0.01	0.1	12/06/06 6:45	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	84.4		*	% Passing	0.1	0.5	12/14/06 9:45	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	79.3		*	% Passing	0.1	0.5	11/29/06 17:00	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	93.6		*	%	0.1	0.5	11/29/06 8:17	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		16.3		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Sand		45.0		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Silt		38.8		*	%	0.1	0.5	12/13/06 0:00	lwt/srs
Texture Classification		L		*				12/13/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-6 24-40"

ACZ Sample ID: ***L59734-20***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 16:59	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:59	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/07/06 15:59	rje/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/04/06 12:57	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							11/30/06 12:00	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	6.1			mg/Kg	0.2	1	12/21/06 10:44	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	6.8	H	*	mg/Kg	0.2	1	12/08/06 22:16	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 22:16	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.111	H	*	%	0.006	0.03	12/14/06 15:18	jag
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	23	H	*	mg/Kg	1	5	12/09/06 17:54	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Reference

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calivation Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

(1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

(1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Carbon Resources

ACZ Project ID: ***L59734***

Project ID:

Calcium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217640													
WG217640ICV	ICV	12/07/06 1:37	II061128-2	100		98.25	mg/L	98.3	90	110			
WG217640ICB	ICB	12/07/06 1:41				U	mg/L		-0.6	0.6			
L59734-20DUP	DUP	12/07/06 3:34			1.27	1.796	meq/L				34.3	20	RC

Carbon, total organic (TOC) ASA No.9 29-2.2.4 Combustion/IR

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217769													
WG217769PBS	PBS	12/07/06 11:00				U	%		-0.3	0.3			
L59734-01DUP	DUP	12/07/06 13:40			.4	.4	%				0	20	RA

Conductivity @25C M120.1 - Meter, w/ Saturated Paste Prep

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217538													
L59734-20DUP	DUP	12/06/06 9:00			.216	.3	mhos/cn				32.6	20	RC

Magnesium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217640													
WG217640ICV	ICV	12/07/06 1:37	II061128-2	100		94.93	mg/L	94.9	90	110			
WG217640ICB	ICB	12/07/06 1:41				U	mg/L		-0.6	0.6			
L59734-20DUP	DUP	12/07/06 3:34			.44	.574	meq/L				26.4	20	RC

Neutralization Potential as CaCO3 M600/2-78-054 3.2.3

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217580													
WG217580LCSS	LCSS	12/05/06 9:25	PCN20880	100		100.16	%						
L59734-01DUP	DUP	12/05/06 10:15			.5	.55	%				9.5	20	RA
WG217923													
L59734-02DUP	DUP	12/11/06 17:40			8.1	7.98	%				1.5	20	
WG217923LCSS	LCSS	12/13/06 4:20	PCN20880	100		111.72	%						
WG217923PBS	PBS	12/13/06 13:00				U	%		-0.1	0.1			

Carbon Resources
Project ID:

ACZ Project ID: ***L59734***

Nitrate/Nitrite as N, extractable (KCL) M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217892													
WG217892ICV	ICV	12/08/06 19:33	WI061207-1	2.416		2.249	mg/L	93.1	90	110			
WG217892ICB	ICB	12/08/06 19:34				U	mg/L		-0.06	0.06			
WG217895													
WG217895ICV	ICV	12/08/06 21:37	WI061207-1	2.416		2.3	mg/L	95.2	90	110			
WG217895ICB	ICB	12/08/06 21:39				U	mg/L		-0.06	0.06			
WG217895LFB1	LFB	12/08/06 21:40	WI060906-4	2		2.028	mg/Kg	101.4	85	115			
WG217693PBS	PBS	12/08/06 21:41				1.73	mg/Kg		-0.6	0.6			N1
L59734-01DUP	DUP	12/08/06 21:44			8	8	mg/Kg				0	20	
WG217895LFB2	LFB	12/08/06 22:18	WI060906-4	2		2.067	mg/Kg	103.4	85	115			
L59736-01DUP	DUP	12/08/06 22:21			4.8	4.89	mg/Kg				1.9	20	
L59736-02AS	AS	12/08/06 22:23	WI060906-4	20	4.9	24.57	mg/Kg	98.4	75	125			
L59734-02AS	AS	12/08/06 22:30	WI060906-4	100	35	138.7	mg/Kg	103.7	75	125			

Nitrite as N, extractable (KCL) M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217892													
WG217892ICV	ICV	12/08/06 19:33	WI061207-1	.609		.618	mg/L	101.5	90	110			
WG217892ICB	ICB	12/08/06 19:34				U	mg/L		-0.03	0.03			
WG217895													
WG217895ICV	ICV	12/08/06 21:37	WI061207-1	.609		.622	mg/L	102.1	90	110			
WG217895ICB	ICB	12/08/06 21:39				U	mg/L		-0.03	0.03			
WG217895LFB1	LFB	12/08/06 21:40	WI060906-4	1		.996	mg/Kg	99.6	85	115			
L59734-01DUP	DUP	12/08/06 21:44			.6	.66	mg/Kg				9.5	20	RA
L59734-02AS	AS	12/08/06 21:46	WI060906-4	10	.7	10.46	mg/Kg	97.6	75	125			
WG217895LFB2	LFB	12/08/06 22:18	WI060906-4	1		1.017	mg/Kg	101.7	85	115			
L59736-01DUP	DUP	12/08/06 22:21			.7	.7	mg/Kg				0	20	RA
L59736-02AS	AS	12/08/06 22:23	WI060906-4	10	.5	9.53	mg/Kg	90.3	75	125			
WG218122													
WG218122ICV	ICV	12/13/06 19:17	WI061207-1	.609		.595	mg/L	97.7	90	110			
WG218122ICB	ICB	12/13/06 19:19				U	mg/L		-0.03	0.03			
WG218122LFB	LFB	12/13/06 19:20	WI060906-4	1		.986	mg/Kg	98.6	85	115			
WG217693PBS	PBS	12/13/06 19:21				.52	mg/Kg		-0.3	0.3			N1
L59734-01DUP	DUP	12/13/06 19:24			.7	.62	mg/Kg				12.1	20	RA
L59734-09AS	AS	12/13/06 19:26	WI060906-4	10	U	9.44	mg/Kg	94.4	75	125			

Carbon Resources ACZ Project ID: ***L59734***

Project ID:

Nitrogen, total Kjeldahl M351.2 - TKN by Block Digester

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216825													
WG216639ICV	ICV	11/18/06 20:36	WI061027-1	4		3.88	mg/L	97	90	110			
WG216639ICB	ICB	11/18/06 20:37				U	mg/L		-0.3	0.3			
WG216639LFB1	LFB	11/18/06 20:40	WI061027-5	2.5		2.48	%	99.2	85	115			
WG216639PBS1	PBS	11/18/06 20:52				.0021	%		-0.006	0.006			
WG216639PBS2	PBS	11/18/06 21:11				.003	%		-0.006	0.006			
WG216639LFB2	LFB	11/18/06 21:12	WI061027-5	2.5		2.4	%	96	85	115			
L59734-02DUP	DUP	11/18/06 22:28			.048	.048	%				0	20	
L59734-01MS	MS	11/18/06 22:51	5XPTSTKN	.035	.066	.1579	%	262.6	75	125			M1
WG217529													
WG217529ICV1	ICV	12/04/06 12:17	WI061129-2	4		3.79	mg/L	94.8	90	110			
WG217469ICB	ICB	12/04/06 12:18				U	mg/L		-0.3	0.3			
WG217529ICV2	ICV	12/04/06 13:11	WI061129-2	4		3.75	mg/L	93.8	90	110			
WG217529ICB1	ICB	12/04/06 13:12				U	mg/L		-0.3	0.3			
WG217539													
WG217470ICB	ICB	12/04/06 13:29				U	mg/L		-0.3	0.3			
WG217470PBS	PBS	12/04/06 13:31				.0031	%		-0.006	0.006			
WG217470LFB	LFB	12/04/06 13:32	WI061129-6	2.5		2.2	%	88	85	115			
L59734-11MS	MS	12/04/06 13:34	WI061129-6	.0375	.01	.03	%	53.3	75	125			M2
L59734-12DUP	DUP	12/04/06 13:36			.042	.0527	%				22.6	20	RD
WG218152													
WG218152ICV1	ICV	12/14/06 15:10	WI061129-2	4		3.93	mg/L	98.3	90	110			
WG218073ICB	ICB	12/14/06 15:12				U	mg/L		-0.3	0.3			
WG218073LFB	LFB	12/14/06 15:20	WI061129-6	2.5		2.66	%	106.4	85	115			
L60098-01DUP	DUP	12/14/06 15:29			6.7	6.97	%				4	20	

Percent Clay ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217996													
L59734-01DUP	DUP	12/12/06 11:02			20	20	%				0	20	

Percent Sand ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217996													
L59734-01DUP	DUP	12/12/06 11:02			50	51.3	%				2.6	20	

Percent Silt ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217996													
L59734-01DUP	DUP	12/12/06 11:02			30	28.8	%				4.1	20	

pH, Saturated Paste USDA No. 60 (21A)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217538													
L59734-20DUP	DUP	12/06/06 9:00			7	7.04	units				0.6	20	

Carbon Resources
Project ID:

ACZ Project ID: ***L59734***

Phosphorus, extractable (AB-DTPA) M365.1 - Automated Ascorbic Acid

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217910													
WG217910ICV	ICV	12/09/06 17:21	SCN000224	.65228		.605	mg/L	92.8	90	110			
WG217910ICB	ICB	12/09/06 17:23				U	mg/L		-0.03	0.03			
WG217910LFB	LFB	12/09/06 17:24	WI061125-2	.5		.495	mg/Kg	99	85	115			
WG217564PBS	PBS	12/09/06 17:25				3.5	mg/Kg		-3	3			N1
L59734-01AS	AS	12/09/06 17:27	WI061125-2	50	39	63.2	mg/Kg	48.4	75	125			M2
L59734-01DUP	DUP	12/09/06 17:28			39	37.8	mg/Kg				3.1	20	

Potassium, extractable (AB-DTPA) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217909													
WG217909ICV	ICV	12/10/06 2:30	II061128-2	20		20.37	mg/L	101.9	90	110			
WG217909ICB	ICB	12/10/06 2:34				U	mg/L		-0.9	0.9			
WG217564PBS	PBS	12/10/06 2:50				U	mg/L		-60	60			
L59734-01DUP	DUP	12/10/06 2:58			220	210	mg/L				4.7	20	
L59734-02AS	AS	12/10/06 3:06	II061207-3	4975.507	120	4953	mg/L	97.1	75	125			
L59734-02ASD	ASD	12/10/06 3:10	II061207-3	4975.507	120	5270	mg/L	103.5	75	125	6.2	20	

Potassium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217640													
WG217640ICV	ICV	12/07/06 1:37	II061128-2	20		20.15	mg/L	100.8	90	110			
WG217640ICB	ICB	12/07/06 1:41				U	mg/L		-0.9	0.9			
L59734-20DUP	DUP	12/07/06 3:34			.235	.2939	meq/L				22.3	20	RC

Saturation Percent USDA No. 60 (2)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217538													
L59734-20DUP	DUP	12/06/06 9:00			42.8	41.17	%				3.9	20	

Sodium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217640													
WG217640ICV	ICV	12/07/06 1:37	II061128-2	100		99.19	mg/L	99.2	90	110			
WG217640ICB	ICB	12/07/06 1:41				U	mg/L		-0.9	0.9			
L59734-20DUP	DUP	12/07/06 3:34			.39	.52	meq/L				28.5	20	RC

Solids, Percent CLPSOW390, PART F, D-98

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217225													
WG217225PBS	PBS	11/28/06 13:00				U	%		99.9	100.1			
L59734-20DUP	DUP	11/29/06 9:14			93.6	92.95	%				0.7	20	

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Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59734***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-01	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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Carbon Resources

ACZ Project ID: ***L59734***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-02	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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Carbon Resources

ACZ Project ID: ***L59734***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-03	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59734***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-04	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-05	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-06	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218152	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-07	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-08	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-09	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG218122	Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-10	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216825	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-11	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217539	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-12	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217539	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-13	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG218122	Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218152	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-14	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217539	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-15	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217539	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-16	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217539	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
			M351.2 - TKN by Block Digester	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M351.2 - TKN by Block Digester	RD	For a solid matrix, the spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-17	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218152	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-18	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218152	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-19	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218152	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59734-20	WG217640	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217909	Potassium, extractable (AB-DTPA)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG217640	Potassium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217769	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217538	Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217580	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218152	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217910	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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Certification Qualifiers

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ACZ Project ID: ***L59734***

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3
pH, Saturated Paste	USDA No. 60 (21A)
Saturation Percent	USDA No. 60 (2)
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2
Solids, Percent	CLPSOW390, PART F, D-98
Texture by Hydrometer	ASTM D 422 Hydrometer

Wet Chemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid

ACZ Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Carbon Resources

ACZ Project ID: L59734
Date Received: 10/31/2006
Received By:
Date Printed: 10/31/2006

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?			X
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
BUCKET X 8		22.5	16

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Carbon Resources

ACZ Project ID: L59734
Date Received: 10/31/2006
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L59734-01	2A-1 10-24"									X		
L59734-02	2A-1 24-44"									X		
L59734-03	2A-1 44-65"									X		
L59734-04	2A-1 65-80"									X		
L59734-05	2A-2 0-5"									X		
L59734-06	2A-2 5-14"									X		
L59734-07	2A-2 14-25"									X		
L59734-08	2A-2 25-38"									X		
L59734-09	2A-3 0-9"									X		
L59734-10	2A-3 9-19"									X		
L59734-11	2A-3 19-36"									X		
L59734-12	2A-3 36-52"									X		
L59734-13	2A-5 0-6"									X		
L59734-14	2A-5 6-12"									X		
L59734-15	2A-5 12-24"									X		
L59734-16	2A-5 24-48"									X		
L59734-17	2A-6 0-6"									X		
L59734-18	2A-6 6-12"									X		
L59734-19	2A-6 12-24"									X		
L59734-20	2A-6 24-40"									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L59734

Carbon Resources Soil Sample Increments
Kinney Mine, Scofield Utah
Sampled October 14-18, 2006
By Bruce Chesler and Greg Hunt
Telephone 435-826-4961
Billed to Carbon Resources

Mailed UPS on October 24, 2006 to:
ACZ Laboratory
2773 Downhill Drive
Steamboat Springs, Colorado, 80487
Attn. Sue Webber telephone 1-800-334-5493 Ext.110

Soil Samples sent in 5-gallon white plastic buckets from Escalante, Utah, and coal samples sent separately in a bucket from Cedaredege, Colorado. The coal sample increments are required to have the following additional analyses, along with the soil horizons found above and below them in their respective soil positions. These will include soil horizons and coal materials sampled at 3 locations, (D3, D9A, D9B) including a total of 19 samples.

Total Organic Carbon (Combustion Method, Western States Lab Testing Program, 1998, volume 4.10, page 88)
Soluble Selenium reported in mg/kg (Hydric Generation AA-Spectrometry and Flourimetry of water extracted Selenium)
Available Boron reported in mg/kg (saturation extract)
Acid Potential reported % pyric S
Neutralization Potential Tons CaCo3 equivalent/1000 tons

The remaining samples are as follows:

D1 0-6, 6-16, 16-25, 25-40, 40-65, 65-90 (6 samples)

D2 0-6, 6-24 (2 samples)

D3 Coal and Soil sent in separate shipments 0-10, 10-20, 20-40, 40-60, 60-75, 1 coal (7)

D4 0-8, 8-16, (2 samples)

D5 0-6, 6-20, 20-40, 40-60 (4 samples)

D6 0-7, coal not sampled, 24-48, 48-72 (3 samples)

D7 0-6, 6-20, 20-42, 42-58, 58-70 (5 samples)

D8 0-6, 6-13, 13-26, 26-48 (4 samples)

D9A coal and soil sent in two shipments 0-6, 6-12, 12-30, 30-68, 68-95, 95-115, 115-140 (7 samples)

D9B coal and soil sent separately 0-6, 6-12, 12-30, 30-52, 52-80, 80-102 (6 samples)

D10 0-5, 5-11, 11-23, 23-35 (4 samples)

D11 0-12, did not sample coal, 62-82 (2samples)

D12 0-6, 6-14, 14-28, 28-48, 48-66 (5 samples)

2A-1 0-10, 10-24, 24-44, 44-65, 65-80 (5 samples)

2A-2 0-5, 5-14, 14-25, 25-38 (4 samples)

2A-3 0-9, 9-19, 19-36, 36-52 (4 samples)

2A-5 0-6, 6-12, 12-24, 24-48 (4 samples)

2A-6 0-6, 6-12, 12-24, 24-40, 40-66, 66-80 (6 samples)

2A-7 0-7, 7-20, 20-38 (3 samples)

2B-1 0-9, 9-19, 19-33, 33-51 (4 samples)

1A-1 0-6, 6-17, 17-28, 28-60, 60-100 (5 samples)

1A-2 15-25, 25-40, 40-60, 60-75, 75-90 (5 samples)

1B1 0-7, 7-15, 15-28, 28-60 (4 samples)

Please give me a call if you have any questions on methodology at my office. Phone # 435-826-4961

Thanks,
Bruce Chesler
Representing, Carbon Resources
Escalante, Utah

10.26.06

Sue Webber

From: GHuntBBC@aol.com
Sent: Friday, October 27, 2006 12:52 PM
To: bches@scinternet.net; Sue Webber
Subject: Sue Weber Carbon Resources Soil Samples

FROM: **Geo-Hunt Consulting**
16577 Columbine Lane
Cedaredge, CO 81413
970-856-9477

TO: **Sue Webber, Project Manager**
ACZ Laboratories, Inc.
2773 Downhill Drive,
Steamboat Springs, Co 80487

RE: **TRANSMITTAL OF SOIL SAMPLES**

Dear Sue:
You have already received a rather large number of samples from BRUCE CHESLER, soil scientist from Escalante Utah, from the Carbon Resources "Kinney" Property, Scofield Utah. Enclosed please find the following seven soil samples taken from the same property and are a part of the same project. These samples should be processed with those received directly from Bruce and all of the results should be returned to Bruce.

D3
D4 19"-72"
D9-A 12"- 30"
D9-A 30"- 68"
D9-B 12"- 30"
D9-B 30"- 50"
D11 11"-48"

Note that some of the bag samples received from Bruce and or I may be labeled either Carbon Resources or Kinney. Both names indicate the same project.

Thank you for your prompt attention to this project.

Greg Hunt

Cc: Bruce Chesler

10/31/2006

Very Fine Sand

analyst: as
date: 12-19-06

ACZ L#	Total sample wt. gms	% <2000um sieve	Wt. of sxs used for Texture gms	Wt. of sxs between 105um & 53um gm.	% VFS
L59734-01	579.28	72.0	40.0	8.6	**15.5**
L59734-02	520.45	83.9	40.0	6.7	**14.1**
L59734-03	542.08	90.6	40.0	5.4	**12.2**
L59734-04	454.40	90.1	40.0	6.0	**13.5**
L59734-05	453.77	88.9	40.0	8.8	**19.6**
L59734-06	416.31	88.5	40.0	9.9	**21.9**
L59734-07	540.48	64.5	40.0	8.1	**13.1**
L59734-08	587.54	70.7	40.0	8.8	**15.6**
L59734-09	529.95	86.8	40.0	12.5	**27.1**
L59734-10	554.14	80.7	40.0	8.9	**18.0**
L59734-11	556.67	75.3	40.0	10.3	**19.4**
L59734-12	536.72	61.3	40.0	5.9	**9.0**
L59734-13	382.20	80.4	40.0	9.6	**19.3**
L59734-14	527.81	60.5	40.0	8.3	**12.6**
L59734-15	545.67	45.0	40.0	6.4	**7.2**
L59734-16	467.60	39.3	40.0	4.9	**4.8**
L59734-17	327.47	91.3	40.0	8.6	**19.6**
L59734-18	470.16	83.6	40.0	9.2	**19.2**
L59734-19	555.68	86.8	40.0	8.3	**18.0**
L59734-20	586.68	79.3	40.0	7.8	**15.5**
dup L59734-01	579.28	72.0	40.0	8.8	**15.8**

(wt of sxs between 105um & 53um) / (wt. of sxs used for texture) = VFS of texture

(VFS of Texture) x (% <2000um) = % VFS

additional data from:

-sieve2000 WG217375

-sieve53 WG217376

-texture WG217996

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

December 21, 2006

Report to:
Clay Wisdom
Carbon Resources
PO Box 1789
Albuquerque, NM 87192

Bill to:
Clay Wisdom
Carbon Resources
PO Box 11789
Albuquerque, NM 87192

cc: Greg Hunt, Bruce Chesler

Project ID:
ACZ Project ID: L59735

Clay Wisdom:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 31, 2006. This project has been assigned to ACZ's project number, L59735. Please reference this number in all future inquiries.

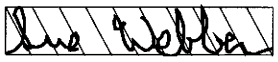
All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L59735. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after January 21, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

If you have any questions or other needs, please contact your Project Manager.



21/Dec/06

Sue Webber, Project Manager, has reviewed and approved this report in its entirety.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 8048: (800) 334-5493

Case Narrative

Carbon Resources

December 21, 2006

Project ID:
ACZ Project ID: L59735

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 20 soil samples from Carbon Resources on October 31, 2006. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L59735. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were not performed within EPA recommended holding times. The EPA holding times apply to water samples, not soil so the "H" flags are not applicable.

Sample Analysis

These samples were analyzed for inorganic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The following anomalies required further explanation not provided by the Extended Qualifier Report:

1. For Nitrate/Nitrite, extractable values flagged with an "N1", the Prep Blank (PBS) was detected above the MDL. The data was flagged and accepted since this is considered typical procedural contamination.

2. For Phosphorus, extractable values flagged with an "N1", the Prep Blank (PBS) was detected above the MDL. The data was flagged and accepted since this is considered typical procedural contamination.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-6 40-60"

ACZ Sample ID: ***L59735-01***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 0:06	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.54			meq/L	0.01	0.05	12/07/06 23:10	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.73			meq/L	0.02	0.08	12/07/06 23:10	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	190		*	mg/Kg	20	50	12/12/06 6:55	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.391			meq/L	0.008	0.03	12/07/06 23:10	gme
Sodium Absorption Ratio	Calculation	1.39				0.03	0.15	12/21/06 10:59	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	1.48		*	meq/L	0.01	0.04	12/07/06 23:10	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.5		*	%	0.1	0.5	12/07/06 12:20	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.512		*	mmhos/cm	0.001	0.01	12/06/06 17:00	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.4		*	%	0.1	0.5	12/08/06 10:28	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.9		*	units	0.1	0.1	12/06/06 17:00	lwt/srs
Saturation Percent	USDA No. 60 (2)	31.60		*	%	0.01	0.1	12/06/06 17:00	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	85.2		*	% Passing	0.1	0.5	12/14/06 10:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	85.2		*	% Passing	0.1	0.5	11/30/06 8:00	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	94.9		*	%	0.1	0.5	12/06/06 17:51	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		25.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		50.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		25.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		L		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-6 40-60"

ACZ Sample ID: ***L59735-01***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 14:08	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:00	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 9:17	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:00	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 9:00	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	3.9			mg/Kg	0.2	1	12/21/06 10:59	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.9	H	*	mg/Kg	0.2	1	12/08/06 20:46	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	1.0	H	*	mg/Kg	0.1	0.5	12/08/06 20:46	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.043	H	*	%	0.001	0.006	12/08/06 17:19	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	31	H	*	mg/Kg	1	5	12/09/06 18:05	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-6 60-80"

ACZ Sample ID: ***L59735-02***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 0:36	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.99			meq/L	0.01	0.05	12/07/06 23:14	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.64			meq/L	0.02	0.08	12/07/06 23:14	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	180		*	mg/Kg	20	50	12/12/06 7:03	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.291			meq/L	0.008	0.03	12/07/06 23:14	gme
Sodium Absorption Ratio	Calculation	1.09				0.03	0.15	12/21/06 10:59	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.98		*	meq/L	0.01	0.04	12/07/06 23:14	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.4	B	*	%	0.1	0.5	12/07/06 15:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.352		*	mmhos/cm	0.001	0.01	12/06/06 17:54	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.0		*	%	0.1	0.5	12/08/06 10:42	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.9		*	units	0.1	0.1	12/06/06 17:54	lwt/srs
Saturation Percent	USDA No. 60 (2)	32.90		*	%	0.01	0.1	12/06/06 17:54	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	86.5		*	% Passing	0.1	0.5	12/14/06 15:06	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	76.5		*	% Passing	0.1	0.5	11/30/06 9:44	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	93.4		*	%	0.1	0.5	12/06/06 19:34	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		25.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		47.5		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		27.5		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		L		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-6 60-80"

ACZ Sample ID: ***L59735-02***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 14:25	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:03	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 9:51	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:03	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 9:09	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	3.6			mg/Kg	0.2	1	12/21/06 10:59	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.4	H	*	mg/Kg	0.2	1	12/08/06 20:49	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	12/08/06 20:49	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.031	H	*	%	0.002	0.008	12/08/06 17:20	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	28	H	*	mg/Kg	1	5	12/09/06 18:07	pjb

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-7 0-7"

ACZ Sample ID: ***L59735-03***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 1:06	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.24			meq/L	0.01	0.05	12/07/06 23:18	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.45			meq/L	0.02	0.08	12/07/06 23:18	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	320		*	mg/Kg	20	50	12/12/06 7:25	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.744			meq/L	0.008	0.03	12/07/06 23:18	gme
Sodium Absorption Ratio	Calculation	0.55				0.03	0.15	12/21/06 10:59	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.51		*	meq/L	0.01	0.04	12/07/06 23:18	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.2		*	%	0.1	0.5	12/07/06 16:20	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.350		*	mmhos/cm	0.001	0.01	12/06/06 18:48	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.6		*	%	0.1	0.5	12/08/06 10:57	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.7		*	units	0.1	0.1	12/06/06 18:48	lwt/srs
Saturation Percent	USDA No. 60 (2)	47.80		*	%	0.01	0.1	12/06/06 18:48	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	75.8		*	% Passing	0.1	0.5	12/14/06 20:12	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	87.6		*	% Passing	0.1	0.5	11/30/06 11:28	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	86.4		*	%	0.1	0.5	12/06/06 20:25	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		20.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		55.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		25.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		L		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-7 0-7"

ACZ Sample ID: ***L59735-03***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 14:34	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:06	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 10:08	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:06	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 9:18	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	4.6			mg/Kg	0.2	1	12/21/06 10:59	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	5.1	H	*	mg/Kg	0.2	1	12/08/06 20:50	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.5	H	*	mg/Kg	0.1	0.5	12/08/06 20:50	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.146	H	*	%	0.009	0.05	12/08/06 18:07	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	17	H	*	mg/Kg	1	5	12/09/06 18:09	pjb

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-7 7-20"

ACZ Sample ID: ***L59735-04***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 1:36	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.45			meq/L	0.01	0.05	12/07/06 23:22	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.49			meq/L	0.02	0.08	12/07/06 23:22	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	260		*	mg/Kg	20	50	12/12/06 7:28	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.596			meq/L	0.008	0.03	12/07/06 23:22	gme
Sodium Absorption Ratio	Calculation	0.43				0.03	0.15	12/21/06 11:00	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.43		*	meq/L	0.01	0.04	12/07/06 23:22	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.6		*	%	0.1	0.5	12/07/06 17:40	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.400		*	mmhos/cm	0.001	0.01	12/06/06 19:42	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.5	B	*	%	0.1	0.5	12/08/06 11:11	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.8		*	units	0.1	0.1	12/06/06 19:42	lwt/srs
Saturation Percent	USDA No. 60 (2)	37.40		*	%	0.01	0.1	12/06/06 19:42	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	77.4		*	% Passing	0.1	0.5	12/15/06 1:18	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	86.9		*	% Passing	0.1	0.5	11/30/06 13:12	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	91.8		*	%	0.1	0.5	12/06/06 21:17	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		22.5		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		51.3		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		26.3		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		L		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-7 7-20"

ACZ Sample ID: ***L59735-04***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 14:42	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:09	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 10:25	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:09	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 9:28	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	3.8			mg/Kg	0.2	1	12/21/06 11:00	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.5	H	*	mg/Kg	0.2	1	12/08/06 20:52	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 20:52	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.056	H	*	%	0.001	0.006	12/08/06 17:22	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	17	H	*	mg/Kg	1	5	12/09/06 18:10	pjb

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-7 20-38"

ACZ Sample ID: ***L59735-05***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 2:05	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.06			meq/L	0.01	0.05	12/07/06 23:26	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.41			meq/L	0.02	0.08	12/07/06 23:26	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	170		*	mg/Kg	20	50	12/12/06 7:32	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.298			meq/L	0.008	0.03	12/07/06 23:26	gme
Sodium Absorption Ratio	Calculation	0.43				0.03	0.15	12/21/06 11:00	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.37		*	meq/L	0.01	0.04	12/07/06 23:26	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.3	B	*	%	0.1	0.5	12/07/06 19:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.281		*	mmhos/cm	0.001	0.01	12/06/06 20:36	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.5	B	*	%	0.1	0.5	12/08/06 11:25	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.8		*	units	0.1	0.1	12/06/06 20:36	lwt/srs
Saturation Percent	USDA No. 60 (2)	34.20		*	%	0.01	0.1	12/06/06 20:36	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	79.5		*	% Passing	0.1	0.5	12/15/06 6:25	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	79.4		*	% Passing	0.1	0.5	11/30/06 14:56	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	93.1		*	%	0.1	0.5	12/06/06 22:08	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		23.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		50.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		26.3		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		L		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2A-7 20-38"

ACZ Sample ID: ***L59735-05***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 14:51	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:12	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 10:42	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:12	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 9:37	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	1.9			mg/Kg	0.2	1	12/21/06 11:00	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	2.7	H	*	mg/Kg	0.2	1	12/08/06 20:53	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	12/08/06 20:53	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.043	H	*	%	0.001	0.006	12/08/06 17:23	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	14	H	*	mg/Kg	1	5	12/09/06 18:12	pjb

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2B-1 0-9"

ACZ Sample ID: ***L59735-06***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 2:35	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.11			meq/L	0.01	0.05	12/07/06 23:30	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.42			meq/L	0.02	0.08	12/07/06 23:30	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	310		*	mg/Kg	20	50	12/12/06 7:36	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.752			meq/L	0.008	0.03	12/07/06 23:30	gme
Sodium Absorption Ratio	Calculation	0.18				0.03	0.15	12/21/06 11:00	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.16		*	meq/L	0.01	0.04	12/07/06 23:30	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.3		*	%	0.1	0.5	12/07/06 20:20	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.298		*	mmhos/cm	0.001	0.01	12/06/06 21:30	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.6		*	%	0.1	0.5	12/08/06 11:39	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.7		*	units	0.1	0.1	12/06/06 21:30	lwt/srs
Saturation Percent	USDA No. 60 (2)	49.70		*	%	0.01	0.1	12/06/06 21:30	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	78.8		*	% Passing	0.1	0.5	12/15/06 11:31	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	84.9		*	% Passing	0.1	0.5	11/30/06 16:41	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	82.1		*	%	0.1	0.5	12/06/06 23:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		20.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		58.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		21.3		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		L		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2B-1 0-9"

ACZ Sample ID: ***L59735-06***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 14:59	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:15	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 11:00	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:15	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 9:47	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	7.9			mg/Kg	0.2	1	12/21/06 11:00	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	8.5	H	*	mg/Kg	0.2	1	12/08/06 20:54	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.6	H	*	mg/Kg	0.1	0.5	12/08/06 20:54	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.173	H	*	%	0.006	0.03	12/08/06 18:11	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	17	H	*	mg/Kg	1	5	12/09/06 18:13	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2B-1 9-19"

ACZ Sample ID: ***L59735-07***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 3:05	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.67			meq/L	0.01	0.05	12/07/06 23:34	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.22			meq/L	0.02	0.08	12/07/06 23:34	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	150		*	mg/Kg	20	50	12/12/06 7:39	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.107			meq/L	0.008	0.03	12/07/06 23:34	gme
Sodium Absorption Ratio	Calculation	0.37				0.03	0.15	12/21/06 11:00	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.25		*	meq/L	0.01	0.04	12/07/06 23:34	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.5		*	%	0.1	0.5	12/07/06 21:40	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.151		*	mmhos/cm	0.001	0.01	12/06/06 22:24	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.9		*	%	0.1	0.5	12/08/06 11:54	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.7		*	units	0.1	0.1	12/06/06 22:24	lwt/srs
Saturation Percent	USDA No. 60 (2)	41.00		*	%	0.01	0.1	12/06/06 22:24	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	91.3		*	% Passing	0.1	0.5	12/15/06 16:37	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	39.9		*	% Passing	0.1	0.5	11/30/06 18:25	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	94.1		*	%	0.1	0.5	12/06/06 23:51	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		33.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		31.3		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		35.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		SiCL		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2B-1 9-19"

ACZ Sample ID: ***L59735-07***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 15:08	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:18	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 11:17	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:18	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 9:56	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	3.2			mg/Kg	0.2	1	12/21/06 11:00	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.1	H	*	mg/Kg	0.2	1	12/08/06 20:59	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.9	H	*	mg/Kg	0.1	0.5	12/08/06 20:59	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.064	H	*	%	0.001	0.007	12/08/06 17:26	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	5	BH	*	mg/Kg	1	5	12/09/06 18:16	pjb

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2B-1 19-33"

ACZ Sample ID: ***L59735-08***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 3:35	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.42			meq/L	0.01	0.05	12/07/06 23:46	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.35			meq/L	0.02	0.08	12/07/06 23:46	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	120		*	mg/Kg	20	50	12/12/06 7:43	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.081			meq/L	0.008	0.03	12/07/06 23:46	gme
Sodium Absorption Ratio	Calculation	0.44				0.03	0.15	12/21/06 11:00	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.42		*	meq/L	0.01	0.04	12/07/06 23:46	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.5		*	%	0.1	0.5	12/07/06 23:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.293		*	mmhos/cm	0.001	0.01	12/06/06 23:18	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.0		*	%	0.1	0.5	12/08/06 12:08	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.1		*	units	0.1	0.1	12/06/06 23:18	lwt/srs
Saturation Percent	USDA No. 60 (2)	51.60		*	%	0.01	0.1	12/06/06 23:18	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	90.5		*	% Passing	0.1	0.5	12/15/06 21:44	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	79.6		*	% Passing	0.1	0.5	11/30/06 20:09	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	93.1		*	%	0.1	0.5	12/07/06 0:42	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		43.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		16.3		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		40.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		SiCL		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2B-1 19-33"

ACZ Sample ID: ***L59735-08***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 15:17	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:22	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 11:34	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:21	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 10:06	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	4.2			mg/Kg	0.2	1	12/21/06 11:00	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	5.1	H	*	mg/Kg	0.2	1	12/08/06 21:00	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.9	H	*	mg/Kg	0.1	0.5	12/08/06 21:00	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.071	H	*	%	0.002	0.008	12/08/06 17:27	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	6	H	*	mg/Kg	1	5	12/09/06 18:17	pjb

** Please refer to Qualifier Reports for detail*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2B-1 33-51"

ACZ Sample ID: ***L59735-09***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 4:05	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	2.52			meq/L	0.01	0.05	12/07/06 23:50	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.58			meq/L	0.02	0.08	12/07/06 23:50	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	70		*	mg/Kg	20	50	12/12/06 7:46	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.061			meq/L	0.008	0.03	12/07/06 23:50	gme
Sodium Absorption Ratio	Calculation	0.24				0.03	0.15	12/21/06 11:01	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.31		*	meq/L	0.01	0.04	12/07/06 23:50	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.3	B	*	%	0.1	0.5	12/08/06 0:20	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.416		*	mmhos/cm	0.001	0.01	12/07/06 0:12	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	6.1		*	%	0.1	0.5	12/12/06 19:40	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.6		*	units	0.1	0.1	12/07/06 0:12	lwt/srs
Saturation Percent	USDA No. 60 (2)	43.40		*	%	0.01	0.1	12/07/06 0:12	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	84.3		*	% Passing	0.1	0.5	12/16/06 2:50	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	88.3		*	% Passing	0.1	0.5	11/30/06 21:53	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	95.9		*	%	0.1	0.5	12/07/06 1:34	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		33.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		30.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		36.3		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		SiCL		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 2B-1 33-51"

ACZ Sample ID: ***L59735-09***
Date Sampled: *10/18/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 15:25	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:25	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 11:51	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:24	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 10:15	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	4.4			mg/Kg	0.2	1	12/21/06 11:01	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	5.3	H	*	mg/Kg	0.2	1	12/08/06 21:01	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.9	H	*	mg/Kg	0.1	0.5	12/08/06 21:01	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.037	H	*	%	0.001	0.006	12/08/06 17:28	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	3	BH	*	mg/Kg	1	5	12/09/06 18:18	pjb

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-1 0-6"

ACZ Sample ID: ***L59735-10***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 5:34	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	3.15			meq/L	0.01	0.05	12/07/06 23:54	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.78			meq/L	0.02	0.08	12/07/06 23:54	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	430		*	mg/Kg	20	50	12/12/06 7:50	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	1.190			meq/L	0.008	0.03	12/07/06 23:54	gme
Sodium Absorption Ratio	Calculation	0.07	B			0.03	0.15	12/21/06 11:01	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.11		*	meq/L	0.01	0.04	12/07/06 23:54	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	2.6		*	%	0.1	0.5	12/08/06 1:40	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.544		*	mmhos/cm	0.001	0.01	12/07/06 1:06	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.8		*	%	0.1	0.5	12/08/06 12:22	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.8		*	units	0.1	0.1	12/07/06 1:06	lwt/srs
Saturation Percent	USDA No. 60 (2)	59.20		*	%	0.01	0.1	12/07/06 1:06	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	79.4		*	% Passing	0.1	0.5	12/16/06 7:56	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	92.5		*	% Passing	0.1	0.5	11/30/06 23:37	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	76.9		*	%	0.1	0.5	12/07/06 2:25	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		20.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		36.3		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		43.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		SiL		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-1 0-6"

ACZ Sample ID: ***L59735-10***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 15:34	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:28	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 12:08	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:27	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 10:25	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	5.4			mg/Kg	0.2	1	12/21/06 11:01	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	6.1	H	*	mg/Kg	0.2	1	12/08/06 21:03	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 21:03	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.269	H	*	%	0.008	0.04	12/08/06 18:12	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	32	H	*	mg/Kg	1	5	12/09/06 18:19	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-1 6-17"

ACZ Sample ID: ***L59735-11***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 6:04	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.11			meq/L	0.01	0.05	12/07/06 23:58	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.36			meq/L	0.02	0.08	12/07/06 23:58	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	210		*	mg/Kg	20	50	12/12/06 7:54	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.362			meq/L	0.008	0.03	12/07/06 23:58	gme
Sodium Absorption Ratio	Calculation	0.11	B			0.03	0.15	12/21/06 11:01	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.10		*	meq/L	0.01	0.04	12/07/06 23:58	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.6		*	%	0.1	0.5	12/08/06 3:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.251		*	mmhos/cm	0.001	0.01	12/07/06 2:00	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.3	B	*	%	0.1	0.5	12/08/06 12:37	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.5		*	units	0.1	0.1	12/07/06 2:00	lwt/srs
Saturation Percent	USDA No. 60 (2)	45.80		*	%	0.01	0.1	12/07/06 2:00	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	77.0		*	% Passing	0.1	0.5	12/16/06 13:03	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	92.6		*	% Passing	0.1	0.5	12/01/06 1:22	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	97.0		*	%	0.1	0.5	12/07/06 3:17	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		18.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		36.3		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		45.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		SiL		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-1 6-17"

ACZ Sample ID: ***L59735-11***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 15:42	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:31	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 12:25	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:30	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 10:34	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	4.2			mg/Kg	0.2	1	12/21/06 11:01	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.9	H	*	mg/Kg	0.2	1	12/08/06 21:04	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 21:04	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.053	H	*	%	0.001	0.007	12/08/06 17:32	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	27	H	*	mg/Kg	1	5	12/09/06 18:20	pjb

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-1 17-28"

ACZ Sample ID: ***L59735-12***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 6:33	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.55			meq/L	0.01	0.05	12/08/06 0:02	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.27			meq/L	0.02	0.08	12/08/06 0:02	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	190		*	mg/Kg	20	50	12/12/06 7:57	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.249			meq/L	0.008	0.03	12/08/06 0:02	gme
Sodium Absorption Ratio	Calculation	0.15				0.03	0.15	12/21/06 11:01	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.10		*	meq/L	0.01	0.04	12/08/06 0:02	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.4	B	*	%	0.1	0.5	12/08/06 4:20	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.161		*	mmhos/cm	0.001	0.01	12/07/06 2:54	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.3	B	*	%	0.1	0.5	12/08/06 12:51	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.4		*	units	0.1	0.1	12/07/06 2:54	lwt/srs
Saturation Percent	USDA No. 60 (2)	39.50		*	%	0.01	0.1	12/07/06 2:54	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	79.4		*	% Passing	0.1	0.5	12/16/06 18:09	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	86.2		*	% Passing	0.1	0.5	12/01/06 3:06	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	96.1		*	%	0.1	0.5	12/07/06 4:08	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		22.5		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		40.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		37.5		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		L		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-1 17-28"

ACZ Sample ID: ***L59735-12***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 15:51	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:34	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 12:42	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:33	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 10:44	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	3.9			mg/Kg	0.2	1	12/21/06 11:01	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.5	H	*	mg/Kg	0.2	1	12/08/06 21:05	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.6	H	*	mg/Kg	0.1	0.5	12/08/06 21:05	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.036	H	*	%	0.001	0.006	12/08/06 17:33	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	19	H	*	mg/Kg	1	5	12/09/06 18:22	pjb

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-1 28-60"

ACZ Sample ID: ***L59735-13***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 7:03	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.89			meq/L	0.01	0.05	12/08/06 0:06	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.24			meq/L	0.02	0.08	12/08/06 0:06	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	130			mg/Kg	20	50	12/12/06 13:47	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.069			meq/L	0.008	0.03	12/08/06 0:06	gme
Sodium Absorption Ratio	Calculation	0.51				0.03	0.15	12/21/06 11:01	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.39		*	meq/L	0.01	0.04	12/08/06 0:06	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.2	B	*	%	0.1	0.5	12/08/06 5:40	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.217		*	mmhos/cm	0.001	0.01	12/07/06 3:48	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.5	B	*	%	0.1	0.5	12/08/06 13:05	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.7		*	units	0.1	0.1	12/07/06 3:48	lwt/srs
Saturation Percent	USDA No. 60 (2)	40.90		*	%	0.01	0.1	12/07/06 3:48	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	80.9		*	% Passing	0.1	0.5	12/16/06 23:15	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	82.0		*	% Passing	0.1	0.5	12/01/06 4:50	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	92.4		*	%	0.1	0.5	12/07/06 5:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		28.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		36.3		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		35.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		CL		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-1 28-60"

ACZ Sample ID: ***L59735-13***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 15:59	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:37	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 13:00	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:36	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 10:53	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	4.5			mg/Kg	0.2	1	12/21/06 11:01	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	5.2	H	*	mg/Kg	0.2	1	12/08/06 21:06	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 21:06	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.0272	H	*	%	0.0007	0.004	12/08/06 17:34	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	25	H	*	mg/Kg	1	5	12/09/06 18:23	pjb

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-1 60-100"

ACZ Sample ID: ***L59735-14***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 8:33	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.96			meq/L	0.01	0.05	12/08/06 0:11	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.23			meq/L	0.02	0.08	12/08/06 0:11	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	90			mg/Kg	20	50	12/12/06 13:57	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.068			meq/L	0.008	0.03	12/08/06 0:11	gme
Sodium Absorption Ratio	Calculation	0.76				0.03	0.15	12/21/06 11:01	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.59		*	meq/L	0.01	0.04	12/08/06 0:11	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.2	B	*	%	0.1	0.5	12/08/06 7:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.265		*	mmhos/cm	0.001	0.01	12/07/06 4:42	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.6		*	%	0.1	0.5	12/08/06 13:19	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.0		*	units	0.1	0.1	12/07/06 4:42	lwt/srs
Saturation Percent	USDA No. 60 (2)	42.20		*	%	0.01	0.1	12/07/06 4:42	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	81.6		*	% Passing	0.1	0.5	12/17/06 4:22	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	76.9		*	% Passing	0.1	0.5	12/01/06 6:34	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	88.6		*	%	0.1	0.5	12/07/06 5:51	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		26.3		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		43.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		30.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		L		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-1 60-100"

ACZ Sample ID: ***L59735-14***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 16:08	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:40	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 13:17	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:39	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 11:03	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	3.1			mg/Kg	0.2	1	12/21/06 11:01	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	3.9	H	*	mg/Kg	0.2	1	12/08/06 21:07	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.8	H	*	mg/Kg	0.1	0.5	12/08/06 21:07	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.019	H	*	%	0.001	0.006	12/08/06 17:38	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	22	H	*	mg/Kg	1	5	12/09/06 18:24	pjb

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-2 15-25"

ACZ Sample ID: ***L59735-15***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 9:32	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	3.73			meq/L	0.01	0.05	12/08/06 0:15	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.25			meq/L	0.02	0.08	12/08/06 0:15	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	150			mg/Kg	20	50	12/12/06 14:01	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.189			meq/L	0.008	0.03	12/08/06 0:15	gme
Sodium Absorption Ratio	Calculation	0.17				0.03	0.15	12/21/06 11:01	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.24		*	meq/L	0.01	0.04	12/08/06 0:15	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	2.0		*	%	0.1	0.5	12/08/06 8:20	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.476		*	mmhos/cm	0.001	0.01	12/07/06 5:36	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1.0		*	%	0.1	0.5	12/08/06 13:34	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.2		*	units	0.1	0.1	12/07/06 5:36	lwt/srs
Saturation Percent	USDA No. 60 (2)	47.30		*	%	0.01	0.1	12/07/06 5:36	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	81.7		*	% Passing	0.1	0.5	12/17/06 9:28	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	82.8		*	% Passing	0.1	0.5	12/01/06 8:19	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	88.0		*	%	0.1	0.5	12/07/06 6:42	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		18.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		48.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		32.5		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		L		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-2 15-25"

ACZ Sample ID: ***L59735-15***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 16:17	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:44	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 13:34	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:42	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 11:12	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	4.1			mg/Kg	0.2	1	12/21/06 11:01	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	5.0	H	*	mg/Kg	0.2	1	12/08/06 21:09	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.9	H	*	mg/Kg	0.1	0.5	12/08/06 21:09	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.19	H	*	%	0.01	0.05	12/08/06 18:13	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	10	H	*	mg/Kg	1	5	12/09/06 18:44	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-2 25-40"

ACZ Sample ID: ***L59735-16***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 11:31	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	4.30			meq/L	0.01	0.05	12/08/06 0:19	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.38			meq/L	0.02	0.08	12/08/06 0:19	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	130			mg/Kg	20	50	12/12/06 14:04	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.135			meq/L	0.008	0.03	12/08/06 0:19	gme
Sodium Absorption Ratio	Calculation	0.14	B			0.03	0.15	12/21/06 11:02	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.22		*	meq/L	0.01	0.04	12/08/06 0:19	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.3		*	%	0.1	0.5	12/08/06 9:40	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.524		*	mmhos/cm	0.001	0.01	12/07/06 6:30	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.8		*	%	0.1	0.5	12/08/06 13:48	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.3		*	units	0.1	0.1	12/07/06 6:30	lwt/srs
Saturation Percent	USDA No. 60 (2)	47.70		*	%	0.01	0.1	12/07/06 6:30	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	81.8		*	% Passing	0.1	0.5	12/17/06 14:34	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	79.6		*	% Passing	0.1	0.5	12/01/06 10:03	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	95.6		*	%	0.1	0.5	12/07/06 7:34	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		16.3		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		45.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		38.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		L		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-2 25-40"

ACZ Sample ID: ***L59735-16***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 16:25	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:47	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 13:51	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:45	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 11:22	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	4.6			mg/Kg	0.2	1	12/21/06 11:02	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	5.3	H	*	mg/Kg	0.2	1	12/08/06 21:10	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 21:10	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.138	H	*	%	0.006	0.03	12/08/06 18:15	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	23	H	*	mg/Kg	1	5	12/09/06 18:45	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-2 40-60"

ACZ Sample ID: ***L59735-17***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 12:01	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	5.92			meq/L	0.01	0.05	12/08/06 0:23	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.79			meq/L	0.02	0.08	12/08/06 0:23	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	200			mg/Kg	20	50	12/12/06 14:08	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.323			meq/L	0.008	0.03	12/08/06 0:23	gme
Sodium Absorption Ratio	Calculation	0.15				0.03	0.15	12/21/06 11:02	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.29		*	meq/L	0.01	0.04	12/08/06 0:23	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.9		*	%	0.1	0.5	12/08/06 11:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.764		*	mmhos/cm	0.001	0.01	12/07/06 7:24	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.6		*	%	0.1	0.5	12/08/06 14:02	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.5		*	units	0.1	0.1	12/07/06 7:24	lwt/srs
Saturation Percent	USDA No. 60 (2)	44.30		*	%	0.01	0.1	12/07/06 7:24	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	81.0		*	% Passing	0.1	0.5	12/17/06 19:41	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	84.7		*	% Passing	0.1	0.5	12/01/06 11:47	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	96.1		*	%	0.1	0.5	12/07/06 8:25	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		18.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		42.5		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		38.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		L		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-2 40-60"

ACZ Sample ID: ***L59735-17***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 16:34	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:50	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 14:08	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:48	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 11:31	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	4.0			mg/Kg	0.2	1	12/21/06 11:02	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.9	H	*	mg/Kg	0.2	1	12/08/06 21:15	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.9	H	*	mg/Kg	0.1	0.5	12/08/06 21:15	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.093	H	*	%	0.007	0.03	12/08/06 18:16	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	33	H	*	mg/Kg	1	5	12/09/06 18:30	pjb

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-2 60-75"

ACZ Sample ID: ***L59735-18***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 12:31	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	3.26			meq/L	0.01	0.05	12/08/06 0:39	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.35			meq/L	0.02	0.08	12/08/06 0:39	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	160			mg/Kg	20	50	12/12/06 14:11	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.153			meq/L	0.008	0.03	12/08/06 0:39	gme
Sodium Absorption Ratio	Calculation	0.16				0.03	0.15	12/21/06 11:02	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.22		*	meq/L	0.01	0.04	12/08/06 0:39	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1.0		*	%	0.1	0.5	12/08/06 12:20	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.450		*	mmhos/cm	0.001	0.01	12/07/06 9:12	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.8		*	%	0.1	0.5	12/08/06 14:17	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.5		*	units	0.1	0.1	12/07/06 9:12	lwt/srs
Saturation Percent	USDA No. 60 (2)	40.90		*	%	0.01	0.1	12/07/06 9:12	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	83.9		*	% Passing	0.1	0.5	12/18/06 0:47	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	74.0		*	% Passing	0.1	0.5	12/01/06 13:31	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	96.0		*	%	0.1	0.5	12/07/06 9:17	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		18.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		46.3		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		35.0		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		L		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-2 60-75"

ACZ Sample ID: ***L59735-18***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 16:42	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:53	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 14:25	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:54	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 11:40	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	3.5			mg/Kg	0.2	1	12/21/06 11:02	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.4	H	*	mg/Kg	0.2	1	12/08/06 21:16	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.9	H	*	mg/Kg	0.1	0.5	12/08/06 21:16	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.091	H	*	%	0.006	0.03	12/08/06 18:17	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	34	H	*	mg/Kg	1	5	12/09/06 18:31	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-2 75-90"

ACZ Sample ID: ***L59735-19***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 13:01	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	11.40			meq/L	0.01	0.05	12/08/06 0:43	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	1.19			meq/L	0.02	0.08	12/08/06 0:43	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	250			mg/Kg	20	50	12/12/06 14:15	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.620			meq/L	0.008	0.03	12/08/06 0:43	gme
Sodium Absorption Ratio	Calculation	0.13	B			0.03	0.15	12/21/06 11:02	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.33		*	meq/L	0.01	0.04	12/08/06 0:43	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.9		*	%	0.1	0.5	12/08/06 13:40	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	1.250		*	mmhos/cm	0.001	0.01	12/07/06 10:06	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.8		*	%	0.1	0.5	12/08/06 14:31	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	7.4		*	units	0.1	0.1	12/07/06 10:06	lwt/srs
Saturation Percent	USDA No. 60 (2)	55.80		*	%	0.01	0.1	12/07/06 10:06	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	83.6		*	% Passing	0.1	0.5	12/18/06 5:53	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	76.0		*	% Passing	0.1	0.5	12/01/06 15:15	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	94.7		*	%	0.1	0.5	12/07/06 10:08	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		17.5		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		43.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		38.8		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		L		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1A-2 75-90"

ACZ Sample ID: ***L59735-19***
Date Sampled: *10/15/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 16:51	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:56	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 14:43	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:57	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 11:50	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	2.9			mg/Kg	0.2	1	12/21/06 11:02	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	3.5	H	*	mg/Kg	0.2	1	12/08/06 21:17	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.6	H	*	mg/Kg	0.1	0.5	12/08/06 21:17	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.077	H	*	%	0.002	0.01	12/08/06 18:19	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	56	H	*	mg/Kg	1	5	12/09/06 18:32	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1B1 0-7"

ACZ Sample ID: ***L59735-20***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 13:30	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	3.71			meq/L	0.01	0.05	12/08/06 0:47	gme
Magnesium, soluble (Sat. Paste)	M6010B ICP	1.06			meq/L	0.02	0.08	12/08/06 0:47	gme
Potassium, extractable (AB-DTPA)	M6010B ICP	520			mg/Kg	20	50	12/12/06 14:18	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	1.690			meq/L	0.008	0.03	12/08/06 0:47	gme
Sodium Absorption Ratio	Calculation	0.11	B			0.03	0.15	12/21/06 11:02	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.17		*	meq/L	0.01	0.04	12/08/06 0:47	gme

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	3.1		*	%	0.1	0.5	12/08/06 15:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.675		*	mmhos/cm	0.001	0.01	12/07/06 11:00	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.9		*	%	0.1	0.5	12/08/06 14:45	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.9		*	units	0.1	0.1	12/07/06 11:00	lwt/srs
Saturation Percent	USDA No. 60 (2)	64.40		*	%	0.01	0.1	12/07/06 11:00	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	83.7		*	% Passing	0.1	0.5	12/18/06 11:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	79.8		*	% Passing	0.1	0.5	12/01/06 17:00	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	75.8		*	%	0.1	0.5	12/07/06 11:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		16.3		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Sand		41.3		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Silt		42.5		*	%	0.1	0.5	12/14/06 0:00	lwt/srs
Texture Classification		L/SiL		*				12/14/06 0:00	lwt/srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1B1 0-7"

ACZ Sample ID: ***L59735-20***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 16:59	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/09/06 9:59	erf
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 15:00	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 18:00	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/01/06 11:59	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	5.0			mg/Kg	0.2	1	12/21/06 11:02	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	5.7	H	*	mg/Kg	0.2	1	12/08/06 21:18	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 21:18	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.219	H	*	%	0.007	0.03	12/08/06 18:20	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	47	H	*	mg/Kg	1	5	12/09/06 18:33	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Reference

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calivation Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

Carbon Resources
Project ID:

ACZ Project ID: ***L59735***

Calcium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217820													
WG217820ICV	ICV	12/07/06 22:50	II061128-2	100		97.91	mg/L	97.9	90	110			
WG217820ICB	ICB	12/07/06 22:54				U	mg/L		-0.6	0.6			
L59735-17DUP	DUP	12/08/06 0:35			5.92	5.914	meq/L				0.1	20	

Carbon, total organic (TOC) ASA No.9 29-2.2.4 Combustion/IR

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217771													
WG217771PBS	PBS	12/07/06 11:00				U	%		-0.3	0.3			
L59735-01DUP	DUP	12/07/06 13:40			.5	.5	%				0	20	RA

Conductivity @25C M120.1 - Meter, w/ Saturated Paste Prep

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217643													
L59735-17DUP	DUP	12/07/06 8:18			.764	.785	mmhos/cm				2.7	20	

Magnesium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217820													
WG217820ICV	ICV	12/07/06 22:50	II061128-2	100		94.23	mg/L	94.2	90	110			
WG217820ICB	ICB	12/07/06 22:54				U	mg/L		-0.6	0.6			
L59735-17DUP	DUP	12/08/06 0:35			.79	.794	meq/L				0.6	20	

Neutralization Potential as CaCO3 M600/2-78-054 3.2.3

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217874													
WG217874LCSS	LCSS	12/08/06 10:14	PCN20880	100		111.48	%						
L59735-20DUP	DUP	12/08/06 14:59			.9	.89	%				1.1	20	RA
WG217923													
L59734-02DUP	DUP	12/11/06 17:40			8.1	7.98	%				1.5	20	
WG217923LCSS	LCSS	12/13/06 4:20	PCN20880	100		111.72	%						
WG217923PBS	PBS	12/13/06 13:00				U	%		-0.1	0.1			

Nitrate/Nitrite as N, extractable (KCL) M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217892													
WG217892ICV	ICV	12/08/06 19:33	WI061207-1	2.416		2.249	mg/L	93.1	90	110			
WG217892ICB	ICB	12/08/06 19:34				U	mg/L		-0.06	0.06			
WG217893													
WG217893ICV	ICV	12/08/06 20:41	WI061207-1	2.416		2.308	mg/L	95.5	90	110			
WG217893ICB	ICB	12/08/06 20:42				U	mg/L		-0.06	0.06			
WG217893LFB	LFB	12/08/06 20:43	WI060906-4	2		2.015	mg/Kg	100.8	85	115			
WG217795PBS	PBS	12/08/06 20:44				1.21	mg/Kg		-0.6	0.6			N1
L59735-01AS	AS	12/08/06 20:47	WI060906-4	20	4.9	23.96	mg/Kg	95.3	75	125			
L59735-01DUP	DUP	12/08/06 20:48			4.9	4.78	mg/Kg				2.5	20	

Carbon Resources

ACZ Project ID: ***L59735***

Project ID:

Nitrite as N, extractable (KCL) M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217892													
WG217892ICV	ICV	12/08/06 19:33	WI061207-1	.609		.618	mg/L	101.5	90	110			
WG217892ICB	ICB	12/08/06 19:34				U	mg/L		-0.03	0.03			
WG217893													
WG217893ICV	ICV	12/08/06 20:41	WI061207-1	.609		.625	mg/L	102.6	90	110			
WG217893ICB	ICB	12/08/06 20:42				U	mg/L		-0.03	0.03			
WG217893LFB	LFB	12/08/06 20:43	WI060906-4	1		.99	mg/Kg	99	85	115			
WG217795PBS	PBS	12/08/06 20:44				.42	mg/Kg		-0.3	0.3			N1
L59735-01AS	AS	12/08/06 20:47	WI060906-4	10	1	9.71	mg/Kg	87.1	75	125			
L59735-01DUP	DUP	12/08/06 20:48			1	1.02	mg/Kg				2	20	

Nitrogen, total Kjeldahl M351.2 - TKN by Block Digester

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217861													
WG217691ICV	ICV	12/08/06 17:01	WI061129-2	4		3.92	mg/L	98	90	110			
WG217691ICB	ICB	12/08/06 17:02				U	mg/L		-0.3	0.3			
WG217691PBS2	PBS	12/08/06 17:36				U	%		-0.003	0.003			
WG217691LFB2	LFB	12/08/06 17:37	WI061129-6	2.5		2.47	%	98.8	85	115			
L59735-14MS	MS	12/08/06 17:39	WI061129-6	.0325	.019	.0476	%	88	75	125			
WG217691PBS1	PBS	12/08/06 17:53				U	%		-0.003	0.003			
WG217691LFB1	LFB	12/08/06 17:54	WI061129-6	2.5		2.54	%	101.6	85	115			
L59735-15DUP	DUP	12/08/06 18:14			.19	.232	%				19.9	20	
L59732-11DUP	DUP	12/08/06 18:24			.153	.1393	%				9.4	20	
L59732-12MS	MS	12/08/06 18:26	5XPTSTKN	.0345	.054	.095	%	118.8	75	125			

Percent Clay ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218128													
L59735-01DUP	DUP	12/14/06 9:45			25	25	%				0	20	

Percent Sand ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218128													
L59735-01DUP	DUP	12/14/06 9:45			50	47.5	%				5.1	20	

Percent Silt ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218128													
L59735-01DUP	DUP	12/14/06 9:45			25	27.5	%				9.5	20	

pH, Saturated Paste USDA No. 60 (21A)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217643													
L59735-17DUP	DUP	12/07/06 8:18			7.5	7.43	units				0.9	20	

Carbon Resources

ACZ Project ID: ***L59735***

Project ID:

Phosphorus, extractable (AB-DTPA) M365.1 - Automated Ascorbic Acid

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217910													
WG217910ICV	ICV	12/09/06 17:21	SCN000224	.65228		.605	mg/L	92.8	90	110			
WG217910ICB	ICB	12/09/06 17:23				U	mg/L		-0.03	0.03			
WG217911													
WG217911ICV	ICV	12/09/06 17:59	SCN000224	.65228		.607	mg/L	93.1	90	110			
WG217911ICB	ICB	12/09/06 18:01				.013	mg/L		-0.03	0.03			
WG217911LFB1	LFB	12/09/06 18:03	WI061125-2	.5		.535	mg/Kg	107	85	115			
WG217618PBS	PBS	12/09/06 18:04				4.1	mg/Kg		-3	3			N1
L59735-01DUP	DUP	12/09/06 18:06			31	31	mg/Kg				0	20	
L59735-02AS	AS	12/09/06 18:08	WI061125-2	50	28	80.3	mg/Kg	104.6	75	125			
WG217911LFB2	LFB	12/09/06 18:35	WI061125-2	.5		.538	mg/Kg	107.6	85	115			
L59736-01DUP	DUP	12/09/06 18:37			34	33.7	mg/Kg				0.9	20	
L59736-02AS	AS	12/09/06 18:40	WI061125-2	50	25	70.5	mg/Kg	91	75	125			

Potassium, extractable (AB-DTPA) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217957													
WG217957ICV	ICV	12/12/06 6:34	II061209-1	20		20.73	mg/L	103.7	90	110			
WG217957ICB	ICB	12/12/06 6:37				U	mg/L		-0.9	0.9			
WG217618PBS	PBS	12/12/06 6:52				U	mg/L		-60	60			
L59735-01DUP	DUP	12/12/06 6:59			190	210	mg/L				10	20	RA
L59735-02AS	AS	12/12/06 7:10	II061207-3	4975.507	180	4954	mg/L	96	75	125			
L59735-02ASD	ASD	12/12/06 7:14	II061207-3	4975.507	180	4927	mg/L	95.4	75	125	0.55	20	
WG218015													
WG218015ICV	ICV	12/12/06 13:09	II061209-1	20		19.26	mg/L	96.3	90	110			
WG218015ICB	ICB	12/12/06 13:12				U	mg/L		-0.9	0.9			
WG217618PBS	PBS	12/12/06 13:26				U	mg/L		-60	60			
L59735-01AS	AS	12/12/06 13:37	II061207-3	4975.507	200	4548	mg/L	87.4	75	125			
L59735-01ASD	ASD	12/12/06 13:40	II061207-3	4975.507	200	4518	mg/L	86.8	75	125	0.66	20	
L59735-01DUP	DUP	12/12/06 13:44			200	210	mg/L				4.9	20	

Potassium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217820													
WG217820ICV	ICV	12/07/06 22:50	II061128-2	20		20.01	mg/L	100.1	90	110			
WG217820ICB	ICB	12/07/06 22:54				U	mg/L		-0.9	0.9			
L59735-17DUP	DUP	12/08/06 0:35			.323	.3425	meq/L				5.9	20	

Saturation Percent USDA No. 60 (2)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217643													
L59735-17DUP	DUP	12/07/06 8:18			44.3	60.91	%				31.6	20	RC

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Inorganic QC Summary

Carbon Resources ACZ Project ID: ***L59735***

Project ID:

Sodium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217820													
WG217820ICV	ICV	12/07/06 22:50	II061128-2	100		99.47	mg/L	99.5	90	110			
WG217820ICB	ICB	12/07/06 22:54				U	mg/L		-0.9	0.9			
L59735-17DUP	DUP	12/08/06 0:35			.29	.384	meq/L				27.9	20	RC

Solids, Percent CLPSOW390, PART F, D-98

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217731													
WG217731PBS	PBS	12/06/06 17:00				U	%		99.9	100.1			
L59735-01DUP	DUP	12/06/06 18:42			94.9	95.1	%				0.2	20	

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Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59735***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59735-01	WG217957	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
L59735-02	WG217957	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59735***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59735-03	WG217957	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
L59735-04	WG217957	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59735***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59735-05	WG217957	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
L59735-06	WG217957	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59735-07	WG217957	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
L59735-08	WG217957	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59735-09	WG217957	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
L59735-10	WG217957	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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L59735-11	WG217957	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
L59735-12	WG217957	Potassium, extractable (AB-DTPA)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59735-13	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
L59735-14	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59735-15	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
L59735-16	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59735-17	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
L59735-18	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

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ACZ Project ID: ***L59735***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59735-19	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
L59735-20	WG217820	Sodium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217771	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217874	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217643	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217893	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Certification Qualifiers

Carbon Resources

ACZ Project ID: ***L59735***

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3
pH, Saturated Paste	USDA No. 60 (21A)
Saturation Percent	USDA No. 60 (2)
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2
Solids, Percent	CLPSOW390, PART F, D-98
Texture by Hydrometer	ASTM D 422 Hydrometer

Wet Chemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Carbon Resources

ACZ Project ID: L59735
Date Received: 10/31/2006
Received By:
Date Printed: 10/31/2006

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?			X
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
BUCKET X 8		22.5	16

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Carbon Resources

ACZ Project ID: L59735
Date Received: 10/31/2006
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L59735-01	2A-6 40-60"									X		
L59735-02	2A-6 60-80"									X		
L59735-03	2A-7 0-7"									X		
L59735-04	2A-7 7-20"									X		
L59735-05	2A-7 20-38"									X		
L59735-06	2B-1 0-9"									X		
L59735-07	2B-1 9-19"									X		
L59735-08	2B-1 19-33"									X		
L59735-09	2B-1 33-51"									X		
L59735-10	1A-1 0-6"									X		
L59735-11	1A-1 6-17"									X		
L59735-12	1A-1 17-28"									X		
L59735-13	1A-1 28-60"									X		
L59735-14	1A-1 60-100"									X		
L59735-15	1A-2 15-25"									X		
L59735-16	1A-2 25-40"									X		
L59735-17	1A-2 40-60"									X		
L59735-18	1A-2 60-75"									X		
L59735-19	1A-2 75-90"									X		
L59735-20	1B1 0-7"									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L59735

Carbon Resources Soil Sample Increments
Kinney Mine, Scofield Utah
Sampled October 14-18, 2006
By Bruce Chesler and Greg Hunt
Telephone 435-826-4961
Billed to Carbon Resources

Mailed UPS on October 24, 2006 to:
ACZ Laboratory
2773 Downhill Drive
Steamboat Springs, Colorado, 80487
Attn. Sue Webber telephone 1-800-334-5493 Ext.110

Soil Samples sent in 5-gallon white plastic buckets from Escalante, Utah, and coal samples sent separately in a bucket from Cedaredege, Colorado. The coal sample increments are required to have the following additional analyses, along with the soil horizons found above and below them in their respective soil positions. These will include soil horizons and coal materials sampled at 3 locations, (D3, D9A, D9B) including a total of 19 samples.

Total Organic Carbon (Combustion Method, Western States Lab Testing Program, 1998, volume 4.10, page 88)
Soluble Selenium reported in mg/kg (Hydric Generation AA-Spectrometry and Flourimetry of water extracted Selenium)
Available Boron reported in mg/kg (saturation extract)
Acid Potential reported % pyric S
Neutralization Potential Tons CaCo3 equivalent/1000 tons

The remaining samples are as follows:

D1 0-6, 6-16, 16-25, 25-40, 40-65, 65-90 (6 samples)

D2 0-6, 6-24 (2 samples)

D3 Coal and Soil sent in separate shipments 0-10, 10-20, 20-40, 40-60, 60-75, 1 coal (7)

D4 0-8, 8-16, (2 samples)

D5 0-6, 6-20, 20-40, 40-60 (4 samples)

D6 0-7, coal not sampled, 24-48, 48-72 (3 samples)

D7 0-6, 6-20, 20-42, 42-58, 58-70 (5 samples)

D8 0-6, 6-13, 13-26, 26-48 (4 samples)

D9A coal and soil sent in two shipments 0-6, 6-12, 12-30, 30-68, 68-95, 95-115, 115-140 (7 samples)

D9B coal and soil sent separately 0-6, 6-12, 12-30, 30-52, 52-80, 80-102 (6 samples)

D10 0-5, 5-11, 11-23, 23-35 (4 samples)

D11 0-12, did not sample coal, 62-82 (2samples)

D12 0-6, 6-14, 14-28, 28-48, 48-66 (5 samples)

2A-1 0-10, 10-24, 24-44, 44-65, 65-80 (5 samples)

2A-2 0-5, 5-14, 14-25, 25-38 (4 samples)

2A-3 0-9, 9-19, 19-36, 36-52 (4 samples)

2A-5 0-6, 6-12, 12-24, 24-48 (4 samples)

2A-6 0-6, 6-12, 12-24, 24-40, 40-66, 66-80 (6 samples)

2A-7 0-7, 7-20, 20-38 (3 samples)

2B-1 0-9, 9-19, 19-33, 33-51 (4 samples)

1A-1 0-6, 6-17, 17-28, 28-60, 60-100 (5 samples)

1A-2 15-25, 25-40, 40-60, 60-75, 75-90 (5 samples)

1B1 0-7, 7-15, 15-28, 28-60 (4 samples)

Please give me a call if you have any questions on methodology at my office. Phone # 435-826-4961

Thanks,
Bruce Chesler
Representing, Carbon Resources
Escalante, Utah

LZG 10.26.06

Sue Webber

From: GHuntBBC@aol.com
Sent: Friday, October 27, 2006 12:52 PM
To: bches@scinternet.net; Sue Webber
Subject: Sue Weber Carbon Resources Soil Samples

FROM: **Geo-Hunt Consulting**
16577 Columbine Lane
Cedaredge, CO 81413
970-856-9477

TO: **Sue Webber, Project Manager**
ACZ Laboratories, Inc.
2773 Downhill Drive,
Steamboat Springs, Co 80487

RE: **TRANSMITTAL OF SOIL SAMPLES**

Dear Sue:
You have already received a rather large number of samples from BRUCE CHESLER, soil scientist from Escalante Utah, from the Carbon Resources "Kinney" Property, Scofield Utah. Enclosed please find the following seven soil samples taken from the same property and are a part of the same project. These samples should be processed with those received directly from Bruce and all of the results should be returned to Bruce.

D3
D4 19"-72"
D9-A 12"- 30"
D9-A 30"- 68"
D9-B 12"- 30"
D9-B 30"- 50"
D11 11"-48"

Note that some of the bag samples received from Bruce and or I may be labeled either Carbon Resources or Kinney. Both names indicate the same project.

Thank you for your prompt attention to this project.

Greg Hunt

Cc: Bruce Chesler

Very Fine Sand

analyst: as
date: 12-19-06

ACZ L#	Total sample wt. gms	% <2000um sieve	Wt. of sxs used for Texture gms	Wt. of sxs between 105um & 53um gm.	% VFS
L59735-01	475.81	85.2	40.0	7.0	**14.9**
L59735-02	510.97	76.5	40.0	7.1	**13.6**
L59735-03	295.07	87.6	40.0	11.1	**24.3**
L59735-04	309.41	86.9	40.0	10.4	**22.6**
L59735-05	335.77	79.4	40.0	10.3	**20.4**
L59735-06	242.34	84.9	40.0	10.0	**21.2**
L59735-07	367.57	39.9	40.0	8.7	**8.7**
L59735-08	373.47	79.6	40.0	4.8	**9.6**
L59735-09	310.37	88.3	40.0	7.1	**15.7**
L59735-10	245.80	92.5	40.0	8.9	**20.6**
L59735-11	321.50	92.6	40.0	9.9	**22.9**
L59735-12	393.30	86.2	40.0	9.6	**20.7**
L59735-13	517.90	82.0	40.0	9.3	**19.1**
L59735-14	489.14	76.9	40.0	9.6	**18.5**
L59735-15	330.12	82.8	40.0	8.8	**18.2**
L59735-16	331.02	79.6	40.0	9.1	**18.1**
L59735-17	515.54	84.7	40.0	9.0	**19.1**
L59735-18	389.72	74.0	40.0	8.7	**16.1**
L59735-19	324.28	76.0	40.0	8.6	**16.3**
L5973-20	275.01	79.8	40.0	8.2	**16.4**
dup L59735-01	475.81	85.2	40.0	6.8	**14.5**

(wt of sxs between 105um & 53um) / (wt. of sxs used for texture) = VFS of texture

(VFS of Texture) x (% <2000um) = % VFS

additional data from:

-sieve2000 WG217377

-sieve53 WG217379

-texture WG218128

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

December 21, 2006

Report to:
Clay Wisdom
Carbon Resources
PO Box 1789
Albuquerque, NM 87192

Bill to:
Clay Wisdom
Carbon Resources
PO Box 11789
Albuquerque, NM 87192

cc: Greg Hunt, Bruce Chesler

Project ID:
ACZ Project ID: L59736

Clay Wisdom:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 31, 2006. This project has been assigned to ACZ's project number, L59736. Please reference this number in all future inquiries.

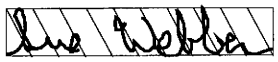
All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L59736. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after January 21, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

If you have any questions or other needs, please contact your Project Manager.



21/Dec/06

Sue Webber, Project Manager, has reviewed and approved this report in its entirety.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 8048 (800) 334-5493

Case Narrative

Carbon Resources

December 21, 2006

Project ID:
ACZ Project ID: L59736

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 3 soil samples from Carbon Resources on October 31, 2006. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L59736. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were not performed within EPA recommended holding times. The EPA holding times apply to water samples, not soil so the "H" flags are not applicable.

Sample Analysis

These samples were analyzed for inorganic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The following anomalies required further explanation not provided by the Extended Qualifier Report:

1. For Nitrate/Nitrite, extractable values flagged with an "N1", the Prep Blank (PBS) was detected above the MDL. The data was flagged and accepted since this is considered typical procedural contamination.

2. For Phosphorus, extractable values flagged with an "N1", the Prep Blank (PBS) was detected above the MDL. The data was flagged and accepted since this is considered typical procedural contamination.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1B1 7-15"

ACZ Sample ID: ***L59736-01***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 14:00	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	1.81		*	meq/L	0.01	0.05	12/11/06 15:22	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.46		*	meq/L	0.02	0.08	12/11/06 15:22	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	310			mg/Kg	30	100	12/14/06 12:56	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.819			meq/L	0.008	0.03	12/11/06 15:22	msh
Sodium Absorption Ratio	Calculation	0.57				0.03	0.15	12/21/06 0:00	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.61			meq/L	0.01	0.04	12/11/06 15:22	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.8		*	%	0.1	0.5	12/07/06 18:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.481		*	mmhos/cm	0.001	0.01	12/06/06 17:00	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.6		*	%	0.1	0.5	12/08/06 11:24	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.6		*	units	0.1	0.1	12/06/06 17:00	lwt/srs
Saturation Percent	USDA No. 60 (2)	130		*	%	0.01	0.1	12/06/06 17:00	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	83.3		*	% Passing	0.1	0.5	12/18/06 11:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	79.9		*	% Passing	0.1	0.5	12/04/06 8:00	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	91.7		*	%	0.1	0.5	12/06/06 21:30	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		17.5		*	%	0.1	0.5	12/15/06 0:00	srs
Sand		42.5		*	%	0.1	0.5	12/15/06 0:00	srs
Silt		40.0		*	%	0.1	0.5	12/15/06 0:00	srs
Texture Classification		L		*				12/15/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1B1 7-15"

ACZ Sample ID: ***L59736-01***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 14:45	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/10/06 17:00	erf/srs
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 10:30	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:00	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/04/06 9:00	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	4.1			mg/Kg	0.2	1	12/21/06 0:00	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.8	H	*	mg/Kg	0.2	1	12/08/06 22:19	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 22:19	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.067	H	*	%	0.002	0.008	12/08/06 17:50	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	34	H	*	mg/Kg	1	5	12/09/06 18:36	pjb

** Please refer to Qualifier Reports for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1B1 15-28"

ACZ Sample ID: ***L59736-02***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 14:30	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.71		*	meq/L	0.01	0.05	12/11/06 15:25	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.21		*	meq/L	0.02	0.08	12/11/06 15:25	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	180			mg/Kg	30	100	12/14/06 13:13	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.380			meq/L	0.008	0.03	12/11/06 15:25	msh
Sodium Absorption Ratio	Calculation	1.25				0.03	0.15	12/21/06 0:00	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.85			meq/L	0.01	0.04	12/11/06 15:25	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.4	B	*	%	0.1	0.5	12/08/06 8:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.329		*	mmhos/cm	0.001	0.01	12/06/06 23:00	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.4	B	*	%	0.1	0.5	12/08/06 12:36	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.3		*	units	0.1	0.1	12/06/06 23:00	lwt/srs
Saturation Percent	USDA No. 60 (2)	86.70		*	%	0.01	0.1	12/06/06 23:00	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	82.3		*	% Passing	0.1	0.5	12/18/06 11:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	79.3		*	% Passing	0.1	0.5	12/04/06 10:00	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	96.8		*	%	0.1	0.5	12/07/06 6:30	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		12.5		*	%	0.1	0.5	12/15/06 0:00	srs
Sand		42.5		*	%	0.1	0.5	12/15/06 0:00	srs
Silt		45.0		*	%	0.1	0.5	12/15/06 0:00	srs
Texture Classification		SiL		*				12/15/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1B1 15-28"

ACZ Sample ID: ***L59736-02***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 16:15	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/10/06 17:15	erf/srs
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 13:30	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:20	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/04/06 9:30	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	4.4			mg/Kg	0.2	1	12/21/06 0:00	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.9	H	*	mg/Kg	0.2	1	12/08/06 22:22	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.5	H	*	mg/Kg	0.1	0.5	12/08/06 22:22	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.074	H	*	%	0.002	0.009	12/08/06 17:51	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	25	H	*	mg/Kg	1	5	12/09/06 18:39	pjb

** Please refer to Qualifier Reports for detail.*

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1B1 28-60"

ACZ Sample ID: ***L59736-03***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							12/07/06 15:00	nps

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, soluble (Sat. Paste)	M6010B ICP	0.68		*	meq/L	0.01	0.05	12/11/06 15:29	msh
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.21		*	meq/L	0.02	0.08	12/11/06 15:29	msh
Potassium, extractable (AB-DTPA)	M6010B ICP	90	B		mg/Kg	30	100	12/14/06 13:23	msh
Potassium, soluble (Sat. Paste)	M6010B ICP	0.232			meq/L	0.008	0.03	12/11/06 15:29	msh
Sodium Absorption Ratio	Calculation	0.89				0.03	0.15	12/21/06 0:00	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.60			meq/L	0.01	0.04	12/11/06 15:29	msh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	0.1	B	*	%	0.1	0.5	12/08/06 15:00	brg
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep	0.287		*	mmhos/cm	0.001	0.01	12/07/06 5:00	lwt/srs
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.3	B	*	%	0.1	0.5	12/08/06 13:48	lwt/srs
pH, Saturated Paste	USDA No. 60 (21A)	6.3		*	units	0.1	0.1	12/07/06 5:00	lwt/srs
Saturation Percent	USDA No. 60 (2)	29.90		*	%	0.01	0.1	12/07/06 5:00	lwt/srs
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2	81.7		*	% Passing	0.1	0.5	12/18/06 11:00	rje/srs
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	82.4		*	% Passing	0.1	0.5	12/04/06 12:00	as/rje
Solids, Percent	CLPSOW390, PART F, D-98	97.3		*	%	0.1	0.5	12/07/06 11:00	lwt/srs
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		12.5		*	%	0.1	0.5	12/15/06 0:00	srs
Sand		57.5		*	%	0.1	0.5	12/15/06 0:00	srs
Silt		30.0		*	%	0.1	0.5	12/15/06 0:00	srs
Texture Classification		L		*				12/15/06 0:00	srs
Very Fine Sand	ASA No.9, 15-4.2.2	see attachments							N/A

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Inorganic Analytical Results

Carbon Resources
Project ID:
Sample ID: 1B1 28-60"

ACZ Sample ID: ***L59736-03***
Date Sampled: *10/16/06 00:00*
Date Received: *10/31/06*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
AB-DPTA Extraction	ASA No.9, 3-5.2.3							12/05/06 17:00	brg
Air Dry at 34 Degrees C	USDA No. 1, 1972							11/10/06 17:30	erf/srs
Potassium Chloride Extraction	ASA No. 9 33-3.2.2							12/08/06 15:00	lwt/srs
Saturated Paste Extraction	USDA No. 60 (2)							12/05/06 17:40	lwt/srs
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							12/04/06 10:00	srs

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate as N, extractable (KCL)	Calculation: NO3NO2 minus NO2	4.1			mg/Kg	0.2	1	12/21/06 0:00	calc
Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	4.8	H	*	mg/Kg	0.2	1	12/08/06 22:28	pjb
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	0.7	H	*	mg/Kg	0.1	0.5	12/08/06 22:28	pjb
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	0.015	H	*	%	0.001	0.007	12/08/06 17:52	nps
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	18	H	*	mg/Kg	1	5	12/09/06 18:43	pjb

** Please refer to Qualifier Reports for detail.*

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Inorganic Reference

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calivation Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

Carbon Resources

ACZ Project ID: ***L59736***

Project ID:

Calcium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217956													
WG217956ICV	ICV	12/11/06 15:04	II061209-1	100		98.81	mg/L	98.8	90	110			
WG217956ICB	ICB	12/11/06 15:08				U	mg/L		-0.6	0.6			
L59736-03DUP	DUP	12/11/06 15:33			.68	.833	meq/L				20.2	20	RC

Carbon, total organic (TOC) ASA No.9 29-2.2.4 Combustion/IR

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217772													
WG217772PBS	PBS	12/07/06 11:00				U	%		-0.3	0.3			
L59736-01DUP	DUP	12/08/06 1:00			.8	.8	%				0	20	RA

Conductivity @25C M120.1 - Meter, w/ Saturated Paste Prep

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217647													
L59736-03DUP	DUP	12/07/06 11:00			.287	.306	mhos/cm				6.4	20	

Magnesium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217956													
WG217956ICV	ICV	12/11/06 15:04	II061209-1	100		96.18	mg/L	96.2	90	110			
WG217956ICB	ICB	12/11/06 15:08				U	mg/L		-0.6	0.6			
L59736-03DUP	DUP	12/11/06 15:33			.21	.263	meq/L				22.3	20	RC

Neutralization Potential as CaCO3 M600/2-78-054 3.2.3

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217866													
WG217866LCSS	LCSS	12/08/06 10:12	PCN20880	100		119.6	%						
L59736-03DUP	DUP	12/08/06 15:00			.3	.29	%				3.4	20	RA

Nitrate/Nitrite as N, extractable (KCL) M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217892													
WG217892ICV	ICV	12/08/06 19:33	WI061207-1	2.416		2.249	mg/L	93.1	90	110			
WG217892ICB	ICB	12/08/06 19:34				U	mg/L		-0.06	0.06			
WG217895													
WG217895ICV	ICV	12/08/06 21:37	WI061207-1	2.416		2.3	mg/L	95.2	90	110			
WG217895ICB	ICB	12/08/06 21:39				U	mg/L		-0.06	0.06			
WG217895LFB1	LFB	12/08/06 21:40	WI060906-4	2		2.028	mg/Kg	101.4	85	115			
WG217830PBS	PBS	12/08/06 22:17				2.34	mg/Kg		-0.6	0.6			N1
WG217895LFB2	LFB	12/08/06 22:18	WI060906-4	2		2.067	mg/Kg	103.4	85	115			
L59736-01DUP	DUP	12/08/06 22:21			4.8	4.89	mg/Kg				1.9	20	
L59736-02AS	AS	12/08/06 22:23	WI060906-4	20	4.9	24.57	mg/Kg	98.4	75	125			

Carbon Resources ACZ Project ID: ***L59736***

Project ID:

Nitrite as N, extractable (KCL) M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217892													
WG217892ICV	ICV	12/08/06 19:33	WI061207-1	.609		.618	mg/L	101.5	90	110			
WG217892ICB	ICB	12/08/06 19:34				U	mg/L		-0.03	0.03			
WG217895													
WG217895ICV	ICV	12/08/06 21:37	WI061207-1	.609		.622	mg/L	102.1	90	110			
WG217895ICB	ICB	12/08/06 21:39				U	mg/L		-0.03	0.03			
WG217895LFB1	LFB	12/08/06 21:40	WI060906-4	1		.996	mg/Kg	99.6	85	115			
WG217895LFB2	LFB	12/08/06 22:18	WI060906-4	1		1.017	mg/Kg	101.7	85	115			
L59736-01DUP	DUP	12/08/06 22:21			.7	.7	mg/Kg				0	20	RA
L59736-02AS	AS	12/08/06 22:23	WI060906-4	10	.5	9.53	mg/Kg	90.3	75	125			

Nitrogen, total Kjeldahl M351.2 - TKN by Block Digester

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217861													
WG217691ICV	ICV	12/08/06 17:01	WI061129-2	4		3.92	mg/L	98	90	110			
WG217691ICB	ICB	12/08/06 17:02				U	mg/L		-0.3	0.3			
WG217691PBS2	PBS	12/08/06 17:36				U	%		-0.003	0.003			
WG217691LFB2	LFB	12/08/06 17:37	WI061129-6	2.5		2.47	%	98.8	85	115			
L59735-14MS	MS	12/08/06 17:39	WI061129-6	.0325	.019	.0476	%	88	75	125			
WG217691PBS1	PBS	12/08/06 17:53				U	%		-0.003	0.003			
WG217691LFB1	LFB	12/08/06 17:54	WI061129-6	2.5		2.54	%	101.6	85	115			
L59735-15DUP	DUP	12/08/06 18:14			.19	.232	%				19.9	20	
L59732-12MS	MS	12/08/06 18:26	5XPTSTKN	.0345	.054	.095	%	118.8	75	125			

Percent Clay ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218198													
L59736-01DUP	DUP	12/15/06 13:10			17.5	16.3	%				7.1	20	

Percent Sand ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218198													
L59736-01DUP	DUP	12/15/06 13:10			42.5	42.5	%				0	20	

Percent Silt ASTM D 422 Hydrometer

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218198													
L59736-01DUP	DUP	12/15/06 13:10			40	41.3	%				3.2	20	

pH, Saturated Paste USDA No. 60 (21A)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217647													
L59736-03DUP	DUP	12/07/06 11:00			6.3	6.5	units				3.1	20	

Carbon Resources
Project ID:

ACZ Project ID: ***L59736***

Phosphorus, extractable (AB-DTPA) M365.1 - Automated Ascorbic Acid

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217910													
WG217910ICV	ICV	12/09/06 17:21	SCN000224	.65228		.605	mg/L	92.8	90	110			
WG217910ICB	ICB	12/09/06 17:23				U	mg/L		-0.03	0.03			
WG217911													
WG217911ICV	ICV	12/09/06 17:59	SCN000224	.65228		.607	mg/L	93.1	90	110			
WG217911ICB	ICB	12/09/06 18:01				.013	mg/L		-0.03	0.03			
WG217911LFB1	LFB	12/09/06 18:03	WI061125-2	.5		.535	mg/Kg	107	85	115			
WG217619PBS	PBS	12/09/06 18:34				3.8	mg/Kg		-3	3			N1
WG217911LFB2	LFB	12/09/06 18:35	WI061125-2	.5		.538	mg/Kg	107.6	85	115			
L59736-01DUP	DUP	12/09/06 18:37			34	33.7	mg/Kg				0.9	20	
L59736-02AS	AS	12/09/06 18:40	WI061125-2	50	25	70.5	mg/Kg	91	75	125			

Potassium, extractable (AB-DTPA) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218071													
WG218071ICV	ICV	12/14/06 12:35	II061209-1	20		20.09	mg/L	100.5	90	110			
WG218071ICB	ICB	12/14/06 12:38				U	mg/L		-0.9	0.9			
WG217619PBS	PBS	12/14/06 12:52				U	mg/L		-90	90			
L59736-01AS	AS	12/14/06 13:03	II061207-3	9951.014	310	10756	mg/L	105	75	125			
L59736-01ASD	ASD	12/14/06 13:06	II061207-3	9951.014	310	10328	mg/L	100.7	75	125	4.06	20	
L59736-01DUP	DUP	12/14/06 13:09			310	330	mg/L				6.3	20	

Potassium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217956													
WG217956ICV	ICV	12/11/06 15:04	II061209-1	20		20.2	mg/L	101	90	110			
WG217956ICB	ICB	12/11/06 15:08				U	mg/L		-0.9	0.9			
L59736-03DUP	DUP	12/11/06 15:33			.232	.2186	meq/L				6	20	

Saturation Percent USDA No. 60 (2)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217647													
L59736-03DUP	DUP	12/07/06 11:00			29.9	41.47	%				32.4	20	RC

Sodium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217956													
WG217956ICV	ICV	12/11/06 15:04	II061209-1	100		100.3	mg/L	100.3	90	110			
WG217956ICB	ICB	12/11/06 15:08				U	mg/L		-0.9	0.9			
L59736-03DUP	DUP	12/11/06 15:33			.6	.535	meq/L				11.5	20	

Solids, Percent CLPSOW390, PART F, D-98

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217732													
WG217732PBS	PBS	12/06/06 17:00				U	%		99.9	100.1			
L59736-01DUP	DUP	12/07/06 2:00			91.7	92.26	%				0.6	20	

ACZ Laboratories, Inc.
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Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59736***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59736-01	WG217956	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217772	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217866	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217647	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.
L59736-02	WG217956	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217772	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217866	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217647	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Extended Qualifier Report

Carbon Resources

ACZ Project ID: ***L59736***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59736-03	WG217956	Calcium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Magnesium, soluble (Sat. Paste)	M6010B ICP	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217772	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217866	Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217647	Saturation Percent	USDA No. 60 (2)	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG217895	Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
		Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M353.2 - Automated Cadmium Reduction	N1	See Case Narrative.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217861	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	H1	Sample analysis performed past holding time.
	WG217911	Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid	HD	No pre-extraction hold time is specified in the method. Post-extraction hold time was met.
			M365.1 - Automated Ascorbic Acid	N1	See Case Narrative.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Certification Qualifiers

Carbon Resources

ACZ Project ID: ***L59736***

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR
Conductivity @25C	M120.1 - Meter, w/ Saturated Paste Prep
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3
pH, Saturated Paste	USDA No. 60 (21A)
Saturation Percent	USDA No. 60 (2)
Sieve- 53 um (270 mesh)	ASA No.9, 15-4.2.2
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2
Solids, Percent	CLPSOW390, PART F, D-98
Texture by Hydrometer	ASTM D 422 Hydrometer

Wet Chemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Nitrate/Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction
Nitrite as N, extractable (KCL)	M353.2 - Automated Cadmium Reduction
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester
Phosphorus, extractable (AB-DTPA)	M365.1 - Automated Ascorbic Acid

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Carbon Resources

ACZ Project ID: L59736
Date Received: 10/31/2006
Received By:
Date Printed: 10/31/2006

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?			X
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
BUCKET X 8		22.5	16

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

ACZ Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Carbon Resources

ACZ Project ID: L59736
Date Received: 10/31/2006
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L59736-01	1B1 7-15"									X		
L59736-02	1B1 15-28"									X		
L59736-03	1B1 28-60"									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L59736

Carbon Resources Soil Sample Increments
Kinney Mine, Scofield Utah
Sampled October 14-18, 2006
By Bruce Chesler and Greg Hunt
Telephone 435-826-4961
Billed to Carbon Resources

Mailed UPS on October 24, 2006 to:
ACZ Laboratory
2773 Downhill Drive
Steamboat Springs, Colorado, 80487
Attn. Sue Webber telephone 1-800-334-5493 Ext.110

Soil Samples sent in 5-gallon white plastic buckets from Escalante, Utah, and coal samples sent separately in a bucket from Cedaredege, Colorado. The coal sample increments are required to have the following additional analyses, along with the soil horizons found above and below them in their respective soil positions. These will include soil horizons and coal materials sampled at 3 locations, (D3, D9A, D9B) including a total of 19 samples.

Total Organic Carbon (Combustion Method, Western States Lab Testing Program, 1998, volume 4.10, page 88)
Soluble Selenium reported in mg/kg (Hydric Generation AA-Spectrometry and Flourimetry of water extracted Selenium)
Available Boron reported in mg/kg (saturation extract)
Acid Potential reported % pyric S
Neutralization Potential Tons CaCo3 equivalent/1000 tons

The remaining samples are as follows:

D1 0-6, 6-16, 16-25, 25-40, 40-65, 65-90 (6 samples)

D2 0-6, 6-24 (2 samples)

D3 Coal and Soil sent in separate shipments 0-10, 10-20, 20-40, 40-60, 60-75, 1 coal (7)

D4 0-8, 8-16, (2 samples)

D5 0-6, 6-20, 20-40, 40-60 (4 samples)

D6 0-7, coal not sampled, 24-48, 48-72 (3 samples)

D7 0-6, 6-20, 20-42, 42-58, 58-70 (5 samples)

D8 0-6, 6-13, 13-26, 26-48 (4 samples)

D9A coal and soil sent in two shipments 0-6, 6-12, 12-30, 30-68, 68-95, 95-115, 115-140 (7 samples)

D9B coal and soil sent separately 0-6, 6-12, 12-30, 30-52, 52-80, 80-102 (6 samples)

D10 0-5, 5-11, 11-23, 23-35 (4 samples)

D11 0-12, did not sample coal, 62-82 (2samples)

D12 0-6, 6-14, 14-28, 28-48, 48-66 (5 samples)

2A-1 0-10, 10-24, 24-44, 44-65, 65-80 (5 samples)

2A-2 0-5, 5-14, 14-25, 25-38 (4 samples)

2A-3 0-9, 9-19, 19-36, 36-52 (4 samples)

2A-5 0-6, 6-12, 12-24, 24-48 (4 samples)

2A-6 0-6, 6-12, 12-24, 24-40, 40-66, 66-80 (6 samples)

2A-7 0-7, 7-20, 20-38 (3 samples)

2B-1 0-9, 9-19, 19-33, 33-51 (4 samples)

1A-1 0-6, 6-17, 17-28, 28-60, 60-100 (5 samples)

1A-2 15-25, 25-40, 40-60, 60-75, 75-90 (5 samples)

1B1 0-7, 7-15, 15-28, 28-60 (4 samples)

Please give me a call if you have any questions on methodology at my office. Phone # 435-826-4961

Thanks,
Bruce Chesler
Representing, Carbon Resources
Escalante, Utah

VBC 10.26.06

Sue Webber

From: GHuntBBC@aol.com
Sent: Friday, October 27, 2006 12:52 PM
To: bches@scinternet.net; Sue Webber
Subject: Sue Weber Carbon Resources Soil Samples

FROM: **Geo-Hunt Consulting**
16577 Columbine Lane
Cedaredge, CO 81413
970-856-9477

TO: **Sue Webber, Project Manager**
ACZ Laboratories, Inc.
2773 Downhill Drive,
Steamboat Springs, Co 80487

RE: **TRANSMITTAL OF SOIL SAMPLES**

Dear Sue:
You have already received a rather large number of samples from BRUCE CHESLER, soil scientist from Escalante Utah, from the Carbon Resources "Kinney" Property, Scofield Utah. Enclosed please find the following seven soil samples taken from the same property and are a part of the same project. These samples should be processed with those received directly from Bruce and all of the results should be returned to Bruce.

D3
D4 19"-72"
D9-A 12"- 30"
D9-A 30"- 68"
D9-B 12"- 30"
D9-B 30"- 50"
D11 11"-48"

Note that some of the bag samples received from Bruce and or I may be labeled either Carbon Resources or Kinney. Both names indicate the same project.

Thank you for your prompt attention to this project.

Greg Hunt

Cc: Bruce Chesler

10/31/2006

Very Fine Sand

analyst: as
date: 12-19-06

ACZ L#	Total sample wt. gms	% <2000um sieve	Wt. of sxs used for Texture gms	Wt. of sxs between 105um & 53um gm.	% VFS
L59736-01	363.84	79.9	40.0	8.3	**16.6**
L59736-02	362.18	79.3	40.0	8.9	**17.6**
L59736-03	386.22	82.4	40.0	8.9	**18.3**

(wt of sxs between 105um & 53um) / (wt. of sxs used for texture) = VFS of texture

(VFS of Texture) x (% <2000um) = % VFS

additional data from:

-sieve2000 WG217378

-sieve53 WG217380

-texture WG218198

Intermountain Laboratories Analysis Sheets

Inter-Mountain Laboratories, Inc.
1673 Terra Avenue, Sheridan, Wyoming 82801
(307) 672-8945

Soil Analysis Report
Carbon Resources

Report ID: S0709096001

Project: Kinney Mine
Date Received: 9/7/2007

Date Reported:
Work Order: S0709096

Lab ID	Sample ID	Depths	pH	Saturation	Electrical Conductivity	Calcium	Magnesium	Sodium	Potassium	SAR	Alkalinity
		Inches	s.u.	%	dS/m	meq/L	meq/L	meq/L	meq/L		meq/L
S0709096-001	01-SP-07	0-6	7.3	39.8	0.44	2.48	0.89	0.34	0.43	0.26	1.99
S0709096-002	01-SP-07	6-14	7.4	40.8	0.46	2.92	0.87	0.32	0.28	0.23	1.99
S0709096-003	01-SP-07	14-24	7.7	50.5	1.15	7.19	1.75	1.42	0.12	0.67	2.39
S0709096-004	02-SP-07	0-6	6.6	36.0	0.49	1.48	0.64	0.82	1.40	0.79	1.19
S0709096-005	02-SP-07	6-17	6.8	35.4	0.54	0.84	0.79	1.10	1.32	1.22	1.79
S0709096-006	02-SP-07	17-32	7.2	33.4	1.91	6.10	2.99	4.37	3.95	2.05	1.19
S0709096-007	02-SP-07	32-44	7.4	36.0	3.60	15.1	8.52	7.30	5.75	2.12	1.99
S0709096-008	03-SP-07	0-6	6.5	47.6	0.62	2.05	1.09	1.51	1.31	1.21	1.99
S0709096-009	03-SP-07	6-18	6.9	38.4	0.66	2.57	1.06	1.47	1.10	1.09	2.98
S0709096-010	03-SP-07	18-30	7.2	34.7	2.00	8.14	2.53	3.12	2.31	1.35	2.59
S0709096-011	03-SP-07	30-40	7.6	32.8	3.73	18.4	6.53	6.67	3.23	1.89	1.69
S0709096-012	04-SP-07	0-6	6.6	47.7	0.26	1.32	0.76	0.74	0.63	0.72	1.39
S0709096-013	04-SP-07	6-11	6.6	32.8	0.29	1.52	0.61	0.16	0.44	0.15	1.59
S0709096-014	04-SP-07	11-20	6.7	30.0	0.28	1.41	0.55	0.26	0.41	0.26	1.39
S0709096-015	04-SP-07	20-40	6.9	33.0	0.28	1.44	0.54	0.33	0.15	0.33	1.49
S0709096-016	05-SP-07	0-8	6.5	31.5	0.27	1.54	0.49	0.27	0.21	0.27	1.29
S0709096-017	05-SP-07	8-28	6.7	29.0	0.19	0.66	0.48	0.51	0.19	0.68	0.70
S0709096-018	05-SP-07	28-60	7.1	29.3	0.24	1.03	0.49	0.55	0.10	0.62	1.09
S0709096-019	06-SP-07	0-6	7.3	30.6	0.45	3.01	0.87	0.28	0.31	0.20	3.58
S0709096-020	06-SP-07	6-55	7.4	34.2	1.32	7.04	4.61	1.99	0.29	0.82	1.99

These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H20Sol= water soluble,AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate
Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential
Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A Secor
Karen Secor, Soil Lab Supervisor

Inter-Mountain Laboratories, Inc.
1673 Terra Avenue, Sheridan, Wyoming 82801
(307) 672-8945

Soil Analysis Report
Carbon Resources

Report ID: S0709096001

Project: Kinney Mine
Date Received: 9/7/2007

Date Reported:
Work Order: S0709096

Lab ID	Sample ID	Depths Inches	pH s.u.	Saturation %	Electrical Conductivity dS/m	Calcium meq/L	Magnesium meq/L	Sodium meq/L	Potassium meq/L	SAR	Alkalinity meq/L
S0709096-021	06-SP-07	55-80	6.2	32.1	1.53	10.4	5.66	0.34	0.29	0.12	0.50
S0709096-022	07-SP-07	0-6	6.6	38.4	0.37	1.74	0.67	0.27	0.70	0.24	2.29
S0709096-023	07-SP-07	6-11	6.5	34.2	0.23	0.98	0.48	0.34	0.36	0.40	1.29
S0709096-024	07-SP-07	11-28	6.6	29.6	0.23	1.23	0.50	0.24	0.30	0.26	1.19
S0709096-025	07-SP-07	28-40	7.1	27.9	0.35	2.16	0.72	0.31	0.08	0.26	2.19
S0709096-026	08-SP-07	0-9	6.5	47.6	0.26	1.21	0.45	0.18	0.55	0.20	1.39
S0709096-027	08-SP-07	9-17	6.6	37.3	0.30	1.59	0.58	0.25	0.37	0.24	1.49
S0709096-028	08-SP-07	17-36	6.6	26.2	0.18	0.84	0.35	0.16	0.27	0.21	1.09
S0709096-029	08-SP-07	36-60	6.7	24.3	0.23	0.91	0.53	0.28	0.25	0.33	0.90
S0709096-030	09-SP-07	0-6	6.5	38.6	0.30	1.42	0.54	0.16	0.57	0.16	2.09
S0709096-031	09-SP-07	6-12	6.5	28.8	0.21	1.02	0.40	0.17	0.31	0.20	1.19
S0709096-032	09-SP-07	12-30	6.5	33.0	0.19	0.91	0.49	0.28	0.15	0.34	1.00
S0709096-033	09-SP-07	30-60	6.9	34.7	0.17	0.87	0.38	0.27	0.06	0.34	1.19
S0709096-034	10-SP-07	0-7	6.9	33.4	0.37	2.44	0.76	0.16	0.29	0.13	2.79
S0709096-035	10-SP-07	7-18	6.6	28.6	0.17	0.96	0.38	0.15	0.15	0.18	1.00
S0709096-036	10-SP-07	18-40	6.7	30.0	0.15	0.82	0.23	0.18	0.07	0.25	0.80
S0709096-037	10-SP-07	40-70	7.3	29.0	0.40	2.89	0.56	0.22	0.09	0.17	2.59
S0709096-038	11-SP-07	0-5	6.8	40.8	0.33	1.74	0.64	0.22	0.68	0.20	2.59
S0709096-039	11-SP-07	5-13	6.4	31.8	0.34	1.45	0.70	0.34	0.52	0.33	1.79
S0709096-040	11-SP-07	13-33	6.6	29.4	0.26	1.46	0.55	0.23	0.28	0.23	1.39

These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H20Sol= water soluble,AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate
Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential
Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A Secor
Karen Secor, Soil Lab Supervisor

Inter-Mountain Laboratories, Inc.
1673 Terra Avenue, Sheridan, Wyoming 82801
(307) 672-8945

Soil Analysis Report
Carbon Resources

Report ID: S0709096001

Project: Kinney Mine
Date Received: 9/7/2007

Date Reported:
Work Order: S0709096

Lab ID	Sample ID	Depths	pH	Saturation	Electrical Conductivity	Calcium	Magnesium	Sodium	Potassium	SAR	Alkalinity
		Inches	s.u.	%	dS/m	meq/L	meq/L	meq/L	meq/L		meq/L
S0709096-041	11-SP-07	33-55	6.8	35.4	0.20	1.11	0.50	0.27	0.13	0.30	1.79
S0709096-042	11-SP-07	55-80	7.1	37.1	0.33	1.34	0.70	0.64	0.17	0.63	2.19
S0709096-043	12-SP-07	0-6	7.1	36.3	0.42	2.19	0.77	0.13	0.89	0.11	3.18
S0709096-044	12-SP-07	6-12	7.2	34.7	0.24	0.98	0.42	0.14	0.86	0.17	1.79
S0709096-045	12-SP-07	12-24	7.2	31.5	0.26	1.22	0.45	0.13	0.70	0.15	1.99
S0709096-046	12-SP-07	24-36	7.4	33.0	0.32	2.05	0.72	0.17	0.36	0.15	1.99
S0709096-047	12-SP-07	36-52	7.4	31.0	0.40	2.45	0.75	0.23	0.32	0.18	2.79
S0709096-048	12-SP-07	52-75	7.8	29.8	0.38	2.20	0.79	0.27	0.30	0.22	2.29
S0709096-049	13-SP-07	0-8	7.0	35.0	0.45	2.49	0.99	0.22	0.54	0.16	3.28
S0709096-050	13-SP-07	8-25	6.2	67.9	0.23	1.39	0.46	0.07	0.06	0.07	0.50
S0709096-051	13-SP-07	25-41	6.8	31.7	0.35	2.46	0.56	0.08	0.20	0.07	1.69
S0709096-052	13-SP-07	41-70	6.6	25.8	0.40	1.98	0.77	0.19	0.39	0.17	1.69

These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H20Sol= water soluble,AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate
Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential
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Karen Secor, Soil Lab Supervisor

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Soil Analysis Report
Carbon Resources

Report ID: S0709096001

Project: Kinney Mine
Date Received: 9/7/2007

Date Reported:
Work Order: S0709096

Lab ID	Sample ID	Depths Inches	Sand %	Silt %	Clay %	Texture	Very Fine Sand %	Boron ppm	TKN %	Phosphorus ppm	Selenium ppm
S0709096-001	01-SP-07	0-6	66.0	24.0	10.0	Sandy Loam	14.9		0.30	11.9	
S0709096-002	01-SP-07	6-14	70.0	19.0	11.0	Sandy Loam	17.6		0.46	12.7	
S0709096-003	01-SP-07	14-24	37.0	41.0	22.0	Loam	18.6		0.10	12.6	
S0709096-004	02-SP-07	0-6	47.0	37.0	16.0	Loam	22.6		0.07	30.7	
S0709096-005	02-SP-07	6-17	46.0	36.0	18.0	Loam	25.0		0.02	34.3	
S0709096-006	02-SP-07	17-32	47.0	36.0	17.0	Loam	26.4		0.06	26.8	
S0709096-007	02-SP-07	32-44	40.0	38.0	22.0	Loam	23.5		0.08	17.5	
S0709096-008	03-SP-07	0-6	46.0	35.0	19.0	Loam	25.4		0.06	35.6	
S0709096-009	03-SP-07	6-18	48.0	34.0	18.0	Loam	25.9		0.04	45.2	
S0709096-010	03-SP-07	18-30	42.0	37.0	21.0	Loam	26.8		0.06	45.2	
S0709096-011	03-SP-07	30-40	42.0	37.0	21.0	Loam	24.1		0.01	17.6	
S0709096-012	04-SP-07	0-6	54.0	29.0	17.0	Sandy Loam	23.1		0.14	15.1	
S0709096-013	04-SP-07	6-11	49.0	34.0	17.0	Loam	24.0		0.09	14.2	
S0709096-014	04-SP-07	11-20	50.0	32.0	18.0	Loam	22.4		0.03	12.0	
S0709096-015	04-SP-07	20-40	54.0	25.0	21.0	Sandy Clay Loam	21.9		0.04	14.3	
S0709096-016	05-SP-07	0-8	45.0	33.0	22.0	Loam	23.4		0.05	14.3	
S0709096-017	05-SP-07	8-28	55.0	24.0	21.0	Sandy Clay Loam	26.3		0.03	15.3	
S0709096-018	05-SP-07	28-60	52.0	28.0	20.0	Loam	18.5		0.03	9.09	
S0709096-019	06-SP-07	0-6	48.0	32.0	20.0	Loam	19.4		0.05	12.5	
S0709096-020	06-SP-07	6-55	42.0	33.0	25.0	Loam	12.6	0.79	0.18	1.60	<0.02

These results apply only to the samples tested.

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Lab ID	Sample ID	Depths Inches	Sand %	Silt %	Clay %	Texture	Very Fine Sand %	Boron ppm	TKN %	Phosphorus ppm	Selenium ppm
S0709096-021	06-SP-07	55-80	50.0	30.0	20.0	Loam	21.5		0.01	15.7	
S0709096-022	07-SP-07	0-6	58.0	27.0	15.0	Sandy Loam	20.6		0.04	14.6	
S0709096-023	07-SP-07	6-11	60.0	24.0	16.0	Sandy Loam	25.0		0.04	14.6	
S0709096-024	07-SP-07	11-28	60.0	24.0	16.0	Sandy Loam	18.8		0.03	10.7	
S0709096-025	07-SP-07	28-40	52.0	30.0	18.0	Sandy Loam	17.3		0.03	5.62	
S0709096-026	08-SP-07	0-9	46.0	37.0	17.0	Loam	14.7		0.04	15.7	
S0709096-027	08-SP-07	9-17	44.0	37.0	19.0	Loam	21.9		0.06	14.2	
S0709096-028	08-SP-07	17-36	46.0	37.0	17.0	Loam	18.4		0.02	11.8	
S0709096-029	08-SP-07	36-60	52.0	33.0	15.0	Sandy Loam	21.5		<0.01	11.0	
S0709096-030	09-SP-07	0-6	60.0	26.0	14.0	Sandy Loam	25.1		0.05	18.6	
S0709096-031	09-SP-07	6-12	49.0	32.0	19.0	Loam	22.5		<0.01	9.72	
S0709096-032	09-SP-07	12-30	50.0	29.0	21.0	Loam	26.0		<0.01	10.7	
S0709096-033	09-SP-07	30-60	42.0	44.0	14.0	Loam	23.0		<0.01	15.9	
S0709096-034	10-SP-07	0-7	68.0	21.0	11.0	Sandy Loam	20.6		0.11	12.9	
S0709096-035	10-SP-07	7-18	48.0	33.0	19.0	Loam	22.5		<0.01	14.9	
S0709096-036	10-SP-07	18-40	50.0	29.0	21.0	Loam	23.4		<0.01	11.0	
S0709096-037	10-SP-07	40-70	49.0	33.0	18.0	Loam	21.8		<0.01	11.8	
S0709096-038	11-SP-07	0-5	61.0	23.0	16.0	Sandy Loam	28.3		<0.01	18.6	
S0709096-039	11-SP-07	5-13	52.0	28.0	20.0	Loam	23.5		<0.01	16.6	
S0709096-040	11-SP-07	13-33	57.0	26.0	17.0	Sandy Loam	22.2		0.01	15.6	

These results apply only to the samples tested.

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Lab ID	Sample ID	Depths Inches	Sand %	Silt %	Clay %	Texture	Very Fine Sand %	Boron ppm	TKN %	Phosphorus ppm	Selenium ppm
S0709096-041	11-SP-07	33-55	46.0	30.0	24.0	Loam	24.2		<0.01	14.7	
S0709096-042	11-SP-07	55-80	40.0	34.0	26.0	Loam	26.1		0.01	11.1	
S0709096-043	12-SP-07	0-6	54.0	30.0	16.0	Sandy Loam	21.5		<0.01	18.9	
S0709096-044	12-SP-07	6-12	53.0	31.0	16.0	Sandy Loam	22.5		0.01	16.7	
S0709096-045	12-SP-07	12-24	57.0	28.0	15.0	Sandy Loam	27.7		0.05	15.9	
S0709096-046	12-SP-07	24-36	55.0	30.0	15.0	Sandy Loam	23.4		0.03	16.6	
S0709096-047	12-SP-07	36-52	56.0	30.0	14.0	Sandy Loam	29.4		0.03	17.8	
S0709096-048	12-SP-07	52-75	56.0	29.0	15.0	Sandy Loam	26.7		<0.01	18.8	
S0709096-049	13-SP-07	0-8	62.0	22.0	16.0	Sandy Loam	21.2		0.10	17.3	
S0709096-050	13-SP-07	8-25	88.0	6.0	6.0	Sand	20.9	0.77	0.38	1.44	<0.02
S0709096-051	13-SP-07	25-41	58.0	29.0	13.0	Sandy Loam	24.6		<0.01	16.7	
S0709096-052	13-SP-07	41-70	66.0	21.0	13.0	Sandy Loam	22.0		<0.01	12.7	

These results apply only to the samples tested.

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Lab ID	Sample ID	Depths Inches	CO3 %	Total Carbon %	TOC %	Total Sulfur %	T.S. AB t/1000t	Neut. Pot. t/1000t	T.S. ABP t/1000t
S0709096-001	01-SP-07	0-6	1.5	43.0	42.8				
S0709096-002	01-SP-07	6-14	1.6	43.8	43.6				
S0709096-003	01-SP-07	14-24	4.1	5.5	5.0				
S0709096-004	02-SP-07	0-6	1.4	2.4	2.3				
S0709096-005	02-SP-07	6-17	1.0	1.5	1.4				
S0709096-006	02-SP-07	17-32	1.0	1.2	1.0				
S0709096-007	02-SP-07	32-44	1.0	1.1	0.9				
S0709096-008	03-SP-07	0-6	1.6	6.6	6.4				
S0709096-009	03-SP-07	6-18	1.2	8.1	7.9				
S0709096-010	03-SP-07	18-30	1.2	2.1	1.9				
S0709096-011	03-SP-07	30-40	1.2	1.2	1.1				
S0709096-012	04-SP-07	0-6	1.2	3.5	3.3				
S0709096-013	04-SP-07	6-11	0.8	1.5	1.4				
S0709096-014	04-SP-07	11-20	0.7	0.6	0.5				
S0709096-015	04-SP-07	20-40	1.1	0.4	0.2				
S0709096-016	05-SP-07	0-8	0.8	0.7	0.6				
S0709096-017	05-SP-07	8-28	1.2	0.2	<0.1				
S0709096-018	05-SP-07	28-60	0.7	0.2	0.1				
S0709096-019	06-SP-07	0-6	2.4	3.7	3.5				
S0709096-020	06-SP-07	6-55	5.4	22.7	22.2	0.31	9.67	47.4	37.7

These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H20Sol= water soluble,AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate
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Lab ID	Sample ID	Depths Inches	CO3 %	Total Carbon %	TOC %	Total Sulfur %	T.S. AB t/1000t	Neut. Pot. t/1000t	T.S. ABP t/1000t
S0709096-021	06-SP-07	55-80	0.7	1.3	1.2				
S0709096-022	07-SP-07	0-6	1.1	2.5	2.4				
S0709096-023	07-SP-07	6-11	1.2	1.1	1.0				
S0709096-024	07-SP-07	11-28	0.8	0.7	0.6				
S0709096-025	07-SP-07	28-40	0.6	0.2	0.2				
S0709096-026	08-SP-07	0-9	1.3	14.6	14.4				
S0709096-027	08-SP-07	9-17	1.0	2.3	2.2				
S0709096-028	08-SP-07	17-36	0.5	0.4	0.3				
S0709096-029	08-SP-07	36-60	0.9	0.2	0.1				
S0709096-030	09-SP-07	0-6	0.9	1.4	1.3				
S0709096-031	09-SP-07	6-12	0.4	0.4	0.4				
S0709096-032	09-SP-07	12-30	1.0	0.3	0.2				
S0709096-033	09-SP-07	30-60	0.7	0.2	0.1				
S0709096-034	10-SP-07	0-7	1.2	17.6	17.5				
S0709096-035	10-SP-07	7-18	1.0	1.0	0.9				
S0709096-036	10-SP-07	18-40	0.6	0.4	0.3				
S0709096-037	10-SP-07	40-70	3.0	0.4	<0.1				
S0709096-038	11-SP-07	0-5	0.8	2.0	1.9				
S0709096-039	11-SP-07	5-13	1.1	0.6	0.5				
S0709096-040	11-SP-07	13-33	1.0	0.4	0.3				

These results apply only to the samples tested.

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S0709096-041	11-SP-07	33-55	0.8	0.2	0.1				
S0709096-042	11-SP-07	55-80	1.1	0.1	<0.1				
S0709096-043	12-SP-07	0-6	0.9	1.0	0.9				
S0709096-044	12-SP-07	6-12	1.3	4.1	3.9				
S0709096-045	12-SP-07	12-24	0.6	1.1	1.0				
S0709096-046	12-SP-07	24-36	1.2	1.0	0.8				
S0709096-047	12-SP-07	36-52	0.7	0.9	0.8				
S0709096-048	12-SP-07	52-75	0.9	0.6	0.5				
S0709096-049	13-SP-07	0-8	1.2	11.8	11.6				
S0709096-050	13-SP-07	8-25	1.5	62.9	62.7	0.36	11.4	14.1	2.72
S0709096-051	13-SP-07	25-41	1.0	2.7	2.5				
S0709096-052	13-SP-07	41-70	0.7	0.7	0.6				

These results apply only to the samples tested.

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Karen Secor, Soil Lab Supervisor

Sample ID	Begin Depth	End Depth	pH	Saturation	Electrical Conductivity	Calcium	Magnesium	Sodium	Potassium	SAR
			s.u.	%	dS/m	meq/L	meq/L	meq/L	meq/L	
01-SP-07	0	6	7.3	39.8	0.44	2.48	0.89	0.34	0.43	0.26
01-SP-07	6	14	7.4	40.8	0.46	2.92	0.87	0.32	0.28	0.23
01-SP-07	14	24	7.7	50.5	1.15	7.19	1.75	1.42	0.12	0.67
02-SP-07	0	6	6.6	36.0	0.49	1.48	0.64	0.82	1.40	0.79
02-SP-07	6	17	6.8	35.4	0.54	0.84	0.79	1.10	1.32	1.22
02-SP-07	17	32	7.2	33.4	1.91	6.10	2.99	4.37	3.95	2.05
02-SP-07	32	44	7.4	36.0	3.60	15.1	8.52	7.30	5.75	2.12
03-SP-07	0	6	6.5	47.6	0.62	2.05	1.09	1.51	1.31	1.21
03-SP-07	6	18	6.9	38.4	0.66	2.57	1.06	1.47	1.10	1.09
03-SP-07	18	30	7.2	34.7	2.00	8.14	2.53	3.12	2.31	1.35
03-SP-07	30	40	7.6	32.8	3.73	18.4	6.53	6.67	3.23	1.89
04-SP-07	0	6	6.6	47.7	0.26	1.32	0.76	0.74	0.63	0.72
04-SP-07	6	11	6.6	32.8	0.29	1.52	0.61	0.16	0.44	0.15
04-SP-07	11	20	6.7	30.0	0.28	1.41	0.55	0.26	0.41	0.26
04-SP-07	20	40	6.9	33.0	0.28	1.44	0.54	0.33	0.15	0.33
05-SP-07	0	8	6.5	31.5	0.27	1.54	0.49	0.27	0.21	0.27
05-SP-07	8	28	6.7	29.0	0.19	0.66	0.48	0.51	0.19	0.68
05-SP-07	28	60	7.1	29.3	0.24	1.03	0.49	0.55	0.10	0.62
06-SP-07	0	6	7.3	30.6	0.45	3.01	0.87	0.28	0.31	0.20
06-SP-07	6	55	7.4	34.2	1.32	7.04	4.61	1.99	0.29	0.82
06-SP-07	55	80	6.2	32.1	1.53	10.4	5.66	0.34	0.29	0.12
07-SP-07	0	6	6.6	38.4	0.37	1.74	0.67	0.27	0.70	0.24
07-SP-07	6	11	6.5	34.2	0.23	0.98	0.48	0.34	0.36	0.40
07-SP-07	11	28	6.6	29.6	0.23	1.23	0.50	0.24	0.30	0.26
07-SP-07	28	40	7.1	27.9	0.35	2.16	0.72	0.31	0.08	0.26
08-SP-07	0	9	6.5	47.6	0.26	1.21	0.45	0.18	0.55	0.20
08-SP-07	9	17	6.6	37.3	0.30	1.59	0.58	0.25	0.37	0.24
08-SP-07	17	36	6.6	26.2	0.18	0.84	0.35	0.16	0.27	0.21
08-SP-07	36	60	6.7	24.3	0.23	0.91	0.53	0.28	0.25	0.33
09-SP-07	0	6	6.5	38.6	0.30	1.42	0.54	0.16	0.57	0.16
09-SP-07	6	12	6.5	28.8	0.21	1.02	0.40	0.17	0.31	0.20
09-SP-07	12	30	6.5	33.0	0.19	0.91	0.49	0.28	0.15	0.34
09-SP-07	30	60	6.9	34.7	0.17	0.87	0.38	0.27	0.06	0.34
10-SP-07	0	7	6.9	33.4	0.37	2.44	0.76	0.16	0.29	0.13
10-SP-07	7	18	6.6	28.6	0.17	0.96	0.38	0.15	0.15	0.18
10-SP-07	18	40	6.7	30.0	0.15	0.82	0.23	0.18	0.07	0.25
10-SP-07	40	70	7.3	29.0	0.40	2.89	0.56	0.22	0.09	0.17
11-SP-07	0	5	6.8	40.8	0.33	1.74	0.64	0.22	0.68	0.20
11-SP-07	5	13	6.4	31.8	0.34	1.45	0.70	0.34	0.52	0.33
11-SP-07	13	33	6.6	29.4	0.26	1.46	0.55	0.23	0.28	0.23
11-SP-07	33	55	6.8	35.4	0.20	1.11	0.50	0.27	0.13	0.30
11-SP-07	55	80	7.1	37.1	0.33	1.34	0.70	0.64	0.17	0.63
12-SP-07	0	6	7.1	36.3	0.42	2.19	0.77	0.13	0.89	0.11

Sample ID	Begin Depth	End Depth	pH	Saturation	Electrical Conductivity	Calcium	Magnesium	Sodium	Potassium	SAR
			s.u.	%	dS/m	meq/L	meq/L	meq/L	meq/L	
12-SP-07	6	12	7.2	34.7	0.24	0.98	0.42	0.14	0.86	0.17
12-SP-07	12	24	7.2	31.5	0.26	1.22	0.45	0.13	0.70	0.15
12-SP-07	24	36	7.4	33.0	0.32	2.05	0.72	0.17	0.36	0.15
12-SP-07	36	52	7.4	31.0	0.40	2.45	0.75	0.23	0.32	0.18
12-SP-07	52	75	7.8	29.8	0.38	2.20	0.79	0.27	0.30	0.22
13-SP-07	0	8	7.0	35.0	0.45	2.49	0.99	0.22	0.54	0.16
13-SP-07	8	25	6.2	67.9	0.23	1.39	0.46	0.07	0.06	0.07
13-SP-07	25	41	6.8	31.7	0.35	2.46	0.56	0.08	0.20	0.07
13-SP-07	41	70	6.6	25.8	0.40	1.98	0.77	0.19	0.39	0.17

Sample ID	Alkalinity meq/L	Sand %	Silt %	Clay %	Texture	Very Fine Sand %	Boron ppm	TKN %
01-SP-07	1.99	66.0	24.0	10.0	Sandy Loam	14.9		0.30
01-SP-07	1.99	70.0	19.0	11.0	Sandy Loam	17.6		0.46
01-SP-07	2.39	37.0	41.0	22.0	Loam	18.6		0.10
02-SP-07	1.19	47.0	37.0	16.0	Loam	22.6		0.07
02-SP-07	1.79	46.0	36.0	18.0	Loam	25.0		0.02
02-SP-07	1.19	47.0	36.0	17.0	Loam	26.4		0.06
02-SP-07	1.99	40.0	38.0	22.0	Loam	23.5		0.08
03-SP-07	1.99	46.0	35.0	19.0	Loam	25.4		0.06
03-SP-07	2.98	48.0	34.0	18.0	Loam	25.9		0.04
03-SP-07	2.59	42.0	37.0	21.0	Loam	26.8		0.06
03-SP-07	1.69	42.0	37.0	21.0	Loam	24.1		0.01
04-SP-07	1.39	54.0	29.0	17.0	Sandy Loam	23.1		0.14
04-SP-07	1.59	49.0	34.0	17.0	Loam	24.0		0.09
04-SP-07	1.39	50.0	32.0	18.0	Loam	22.4		0.03
04-SP-07	1.49	54.0	25.0	21.0	Sandy Clay Loam	21.9		0.04
05-SP-07	1.29	45.0	33.0	22.0	Loam	23.4		0.05
05-SP-07	0.70	55.0	24.0	21.0	Sandy Clay Loam	26.3		0.03
05-SP-07	1.09	52.0	28.0	20.0	Loam	18.5		0.03
06-SP-07	3.58	48.0	32.0	20.0	Loam	19.4		0.05
06-SP-07	1.99	42.0	33.0	25.0	Loam	12.6	0.79	0.18
06-SP-07	0.50	50.0	30.0	20.0	Loam	21.5		0.01
07-SP-07	2.29	58.0	27.0	15.0	Sandy Loam	20.6		0.04
07-SP-07	1.29	60.0	24.0	16.0	Sandy Loam	25.0		0.04
07-SP-07	1.19	60.0	24.0	16.0	Sandy Loam	18.8		0.03
07-SP-07	2.19	52.0	30.0	18.0	Sandy Loam	17.3		0.03
08-SP-07	1.39	46.0	37.0	17.0	Loam	14.7		0.04
08-SP-07	1.49	44.0	37.0	19.0	Loam	21.9		0.06
08-SP-07	1.09	46.0	37.0	17.0	Loam	18.4		0.02
08-SP-07	0.90	52.0	33.0	15.0	Sandy Loam	21.5		<0.01
09-SP-07	2.09	60.0	26.0	14.0	Sandy Loam	25.1		0.05
09-SP-07	1.19	49.0	32.0	19.0	Loam	22.5		<0.01
09-SP-07	1.00	50.0	29.0	21.0	Loam	26.0		<0.01
09-SP-07	1.19	42.0	44.0	14.0	Loam	23.0		<0.01
10-SP-07	2.79	68.0	21.0	11.0	Sandy Loam	20.6		0.11
10-SP-07	1.00	48.0	33.0	19.0	Loam	22.5		<0.01
10-SP-07	0.80	50.0	29.0	21.0	Loam	23.4		<0.01
10-SP-07	2.59	49.0	33.0	18.0	Loam	21.8		<0.01
11-SP-07	2.59	61.0	23.0	16.0	Sandy Loam	28.3		<0.01
11-SP-07	1.79	52.0	28.0	20.0	Loam	23.5		<0.01
11-SP-07	1.39	57.0	26.0	17.0	Sandy Loam	22.2		0.01
11-SP-07	1.79	46.0	30.0	24.0	Loam	24.2		<0.01
11-SP-07	2.19	40.0	34.0	26.0	Loam	26.1		0.01
12-SP-07	3.18	54.0	30.0	16.0	Sandy Loam	21.5		<0.01

Sample ID	Alkalinity meq/L	Sand %	Silt %	Clay %	Texture	Very Fine Sand %	Boron ppm	TKN %
12-SP-07	1.79	53.0	31.0	16.0	Sandy Loam	22.5		0.01
12-SP-07	1.99	57.0	28.0	15.0	Sandy Loam	27.7		0.05
12-SP-07	1.99	55.0	30.0	15.0	Sandy Loam	23.4		0.03
12-SP-07	2.79	56.0	30.0	14.0	Sandy Loam	29.4		0.03
12-SP-07	2.29	56.0	29.0	15.0	Sandy Loam	26.7		<0.01
13-SP-07	3.28	62.0	22.0	16.0	Sandy Loam	21.2		0.10
13-SP-07	0.50	88.0	6.0	6.0	Sand	20.9	0.77	0.38
13-SP-07	1.69	58.0	29.0	13.0	Sandy Loam	24.6		<0.01
13-SP-07	1.69	66.0	21.0	13.0	Sandy Loam	22.0		<0.01

APPENDIX 3: Field Pedon Descriptions

BC	9-14-06	60°	Soil:	Depth:	Longitude: ° ' "W	10-14-06	Sec.	T.	R.		
e:	mE:	mN:	Topo Quad.:	Site ID: YR:	State:	County:	Pedon #:	Soil Survey Area:	MLRA / LRU:	Transect: ID:	
	0486825	4397806			UTAH	CARBON		KINNEY		Stop #:	Interval:
:	Landform:	Microfeature:	Anthro:	Elevation:	Aspect:	Slope (%):	Slope Complexity:	Slope Shape: (Up & Dn / Across)			
WTAIN	VALLEY				290°	6	SIMPLE	PLANAR - SLIGHTLY			
rofile Position:	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:	State Physio. Area:	Local Physio. Area:				
JER.		CONCAVE									
	Flooding:	Ponding:	Soil Moisture Status:	Permeability:	Land Cover / Use:						
	Yes	—	MOIST @ 12"	MODERATE	RABBITBRUSH - NATIVE						
erial:	Bedrock:	Kind:	Fract.:	Hard.:	Depth:	Lithostrat. Units:	Group:	Formation:	Member:		
WEAM MIXED	MIXED	COLLUVIAL + ALLUVIUM									
Kind:	Degree:	Runoff:	Surface Frag %:	GR:	CB:	ST:	BD:	CN:	FL:	Diagnostic Horz. / Prop.:	Kind: Depth:
op.		MODERATE	Kind:	20	25	5				—	
l Section:	Ave. Clay %:	Ave. Rock Frag %:									
ge:	22-26	<15%									

D-1 COLUMBINE PORTAL WEST.

VEGETATION :

COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

D-1 COLUMBINE PORTAL

SAMPLED 0-6" } RE-CLAIMED/GRADED
6-15 }
A (BIRD) 16-25
25-40
40-65
65-95+

1½ FEET OF RE-CLAIMED SOIL OVER A-C-C

STREAM-LAID DEPOSITS

VERY LITTLE COAL FINES PRESENT BELOW 2FT

PH090 = 15(P)

D-1
p-2

Method	(in)	(cm)			Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont. Col Mst Shp Loc
Pit	0-6	Bw					GrSL	35 GR 10CB	SG → 1FGR	SO	FR	SO	PO	NONE
"	6-16	Bw					GrSL	25 GR 10CB	1MSBK → SG	SO	FR	SO/PO		
BACKHOE	16-25	A/B					L	15 GR 3CB	1M-FSBK	SH	FR	SS/PO		NATIVE
	25-40	C1					GR L	15 GR 5CB	1M-FSBK	LHA	FI	SS/PS		
	40-65	C2					GR. LS	20 GR 5CB	LOOSE	SO	VFI	SO/PO		
	65-95+	C3					LS	15 GR 10CB	SG	LO	LO	SO/PO		

Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
			2VF,FF	1M					SANDY SEDIMENTARY SUBSOIL
			1VF,F						11 YR 3/1 + 15% COAL FINES
			1VF,F						<5% COAL FINES
			1VF,F						IN PLACES 10% COAL FINES
			1VF						& 15% SOFT WEATHERED BEDROCK BRKD

-a

D-2

BK	10-14-06	CLOUDY	Soil:	Depth:	Longitude: ° ' " W	Datum: 10-14-06	Location: Sec.	T.	R.		
Zone: 0 12	mE: 6806	mN: 4397782	Topo Quad.:	Site ID: YR:	State: UT	County: CARBON	Pedon #:	Soil Survey Area: KINNEY	MLRA / LRU:	Transect: ID: Stop #:	Interval:

scape: WDL	Landform: TOESLOPE	Microfeature:	Anthro:	Elevation:	Aspect: 310°	Slope (%): 4	Slope Complexity: SINGLE	Slope Shape: (Up & Dn / Across) COMPLEX

ope Profile Position: VENOLL	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:	State Physio. Area:	Local Physio. Area:

age: WELL	Flooding: NONE	Ponding:	Soil Moisture Status: MOIST TO 12"	Permeability: MODERATE Ksat:	Land Cover / Use: LOW SAGEBRUSH

t Material: COLLUVIUM	Bedrock:	Kind:	Fract.:	Hard.:	Depth:	Lithostrat. Units: Group: Formation: Member:

on:	Kind:	Degree:	Runoff:	Surface Frag %:	GR:	CB:	ST:	BD:	CN:	FL:	Diagnostic Horz. / Prop.:	Kind:	Depth:
				Kind:	25	15	5		5		ARGILLIC		

ontrol Section:	Ave. Clay %:	Ave. Rock Frag %:
h Range:	<20	50-60%

D-2 (EAST)
RE-GRADED PORTAL AREA OF COLUMBINE MINE, SE EDGE FORMER BDY

VEGETATION :

SOIL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

D-2 COLUMBINE PORTAL

SAMPLED 2 0-6
6-24

TOO ROCKY BELOW THIS TO BE USEFUL TOPSOIL

PHOTO (P) 16

USTOLLISTS, LO-SW.

D-2
P-2

Map Unit Symbol: Date:

Obser. Method	Depth (in) (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont. Col Mst Shp Loc
↑	0 - 6	BwR				SBV LiVM	25g 30cb 10st	SG	Lo	FR	So	Po	
	6-24	BwR				stv LiVM	20g 35cb 15st	SG	Lo	FR	So	Po	
Backhoe ↓	24-45+	C				stv SL	15g 25g 35st	SG	Lo	Fr	So	Po	Road Study Th Sample

Redoximorphic Features ⅛ Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
			1VF-F						Mixture of Subsoil
			1VF-F						Colluvium Mixed 3rd
			VVF						NO SAMPLED: Rocks
e-d									

Describer(s):	Date:	Weather: Temp.: Air:	Latitude: ° ' " N	Datum:	Location: D-3
BC	10-16-06	PARTLY CLOUDS Soil: Depth:	Longitude: ° ' " W		Sec. T. R.

UTM: Zone:	mE:	mN:	Topo Quad.:	Site ID: YR:	State:	County:	Pedon #:	Soil Survey Area:	MLRA / LRU:	Transect: ID:
0	0486886	4398188			UT	CARBON	D-3	KANOSH		Stop #: Interval:

Landscape:	Landform:	Microfeature:	Anthro:	Elevation:	Aspect:	Slope (%):	Slope Complexity:	Slope Shape: (Up & Dn / Across)
MTN.	SIDESLOPE			2359 m	320°	16		COMPLEX

Hillslope Profile Position:	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:	State Physio. Area:	Local Physio. Area:
LOWER							

Drainage:	Flooding:	Ponding:	Soil Moisture Status:	Permeability:	Land Cover / Use:
WELL			MOIST TO 16"	MOD Ksat:	RABBITBRUSH - GRASSES

Parent Material:	Bedrock: Kind:	Fract.:	Hard.:	Depth:	Lithostrat. Units:	Group:	Formation:	Member:
MINED COLLUVIUM W/ MINE WASTE MATERIALS								

Erosion: Kind:	Degree:	Runoff:	Surface Frag %: Kind:	GR:	CB:	ST:	BD:	CN:	FL:	Diagnostic Horz. / Prop.:	Kind:	Depth:
SHEET				5	3	2	2	4	TR			

P.S. Control Section:	Ave. Clay %:	Ave. Rock Frag %:
Depth Range:	<35	26%

D-3 CRUSTIC SUBSURFACE AREA WITH SOME COAL IN PEDON, DISCONTINUOUS

VEGETATION :

SYMBOL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

SAMPLED 0-10"

MIXED COAL ~ 15%

10-20" MINE WASTE MATERIAL FROM MINE MOUTH

20-40"

40-70"

60-75" LENSES

30% OF 10 FEET LONG EXCAVATION WAS COAL FINES + CHUNKS THOUGH I SAMPLED AROUND THESE LENSES

LOOKS LIKE RECLAIMED SUBSOIL → PRACTICAL TOPSOIL TO 20" THEN CRUSTIC MIX / COLLUVIUM / COAL ON SOIL TRENCH FACE, MORE COAL IN LOWER 20"

THAN LOWER 40"

D-3
P-2

Date:

	Obser. Method	Depth (in) (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont. Col Mst Shp
1		0-10	A DIST					10gr 5CB Est	1M-FSBK→MGR	SH	FR	SS	PO	
2	↑	10-20	Bt DIST				GR LMSA	15gr 5st 10CB	2M-FSBK	SH	SH	SS	PS	
3		20-40	Bt2 DIST				CB CL	10GR 35st 15CB	2M-CSBK	VH	VFI	S	P	
4	PIT	40-60	C1				CBV CL	20CB 15GR 10st	3M-CSBK	VH	VFI	S	P	
5	HOLE	60-75+	C2				CBV CL	15gr 20CB 10st	MASSIVE	EH	EF	S	P	
6	BACK													
7														
8														
9														
10														

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1				2VF 1F						25% COARSE
2				2VF 1F						15% COARSE CINDERS
3				1VF						12% COARSE PEBBLES
4				1VF						10% ON FACE CINDERS
5										>10% ON FACE
6										
7										
8										
9	E-D									

Describer(s):	Date:	Weather: Temp.: Air:	Latitude: ° ' " N Datum:	Location: D-4
BC	10-15-06	SUN Soil: Depth:	Longitude: ° ' " W	Sec. T. R.

UTM: Zone: mE: mN:	Topo Quad.:	Site ID: YR: State: County: Pedon #:	Soil Survey Area:	MLRA / LRU:	Transect: ID:
WP 20 0486840 4398109		UTAH CARBON D-4			Stop #: Interval:

Landscape:	Landform:	Microfeature:	Anthro:	Elevation:	Aspect:	Slope (%):	Slope Complexity:	Slope Shape: (Up & Dn / Across)
TOESLOPE				2358m	270°	22		

Hillslope Profile Position:	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:	State Physio. Area:	Local Physio. Area:

Drainage:	Flooding:	Ponding:	Soil Moisture Status:	Permeability:	Land Cover / Use:
WELL-SPD			MOIST TO 16"	MOD SLOW Kast:	ARTRW RABA/SAGE

Parent Material:	Bedrock: Kind: Fract.: Hard.: Depth:	Lithostrat. Units: Group: Formation: Member:
WASTE MATERIAL	NONE	

Erosion: Kind: Degree:	Runoff:	Surface Frag %: GR: CB: ST: BD: CN: FC: COA	Diagnostic Horz. / Prop.: Kind: Depth:
SLIGHT-MOD RILL ON SLOPES > 40%		Kind: 15 15 5 5 3 6	NONE

P.S. Control Section: Ave. Clay %: Ave. Rock Frag %:	
Depth Range: >35%	D-4 50 FEET FROM SR-92 AT LEAST 12 FEET BURIED COAL AT THIS SITE

VEGETATION :

SYMBOL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

D-4 0-8" SAMPLED SUBSOILS (DECLINED DUE TO COAL DUMP SITE)
8-16" 2 "

D-4
P-2

Date:

	Obser. Method	Depth (in)	Depth (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont. Col Mst Shp
1		0-8	0-20	DIRT	SUBSOIL			SiL	15 GR 5CB	MASSIVE SLIGHT FRIABLE	S	P			15% COAL
2		8-12	20-30	COAL	WASTE				10GR 10CB						12% COAL
3		12-47		COAL	WASTE				10GR 10CB						75% "
4		47-55		COAL	WASTE				15GR 15CB						90% "
5		55-64		COAL	WASTE (MOIST)				10GR 2CB						95% "
6															
7															
8															
9															
10															

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1										
2										
3										
4										
5										
6										
7										
8										
9	H-9									
10										

Describer(s):	Date:	Weather:	Temp.:	Air:	Latitude:	Datum:	Location:
BC	10-15-06	51	Soil:	Depth:	Longitude:		Sec. T. R. D-5

UTM: Zone:	mE:	mN:	Topo Quad.:	Site ID: YR:	State:	County:	Pedon #:	Soil Survey Area:	MLRA / LRU:	Transect: ID:
0486845	4398123				UTAH	CARBON	D-5	KINNEY		Stop #: Interval:

Landscape:	Landform:	Microfeature:	Anthro:	Elevation:	Aspect:	Slope (%):	Slope Complexity:	Slope Shape: (Up & Dn / Across)
MTN.	SIDESLOPE			2370M	290	21	COMPLEX	

Hillslope Profile Position:	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:	State Physio. Area:	Local Physio. Area:
LOWER							

Drainage:	Flooding:	Ponding:	Soil Moisture Status:	Permeability: MOD	Land Cover / Use:
MOD WELL				Keat:	

Parent Material:	Bedrock: Kind:	Fract.:	Hard.:	Depth:	Lithostrat. Units: Group:	Formation:	Member:
COLLUVIUM	NONE TO 6 FEET						

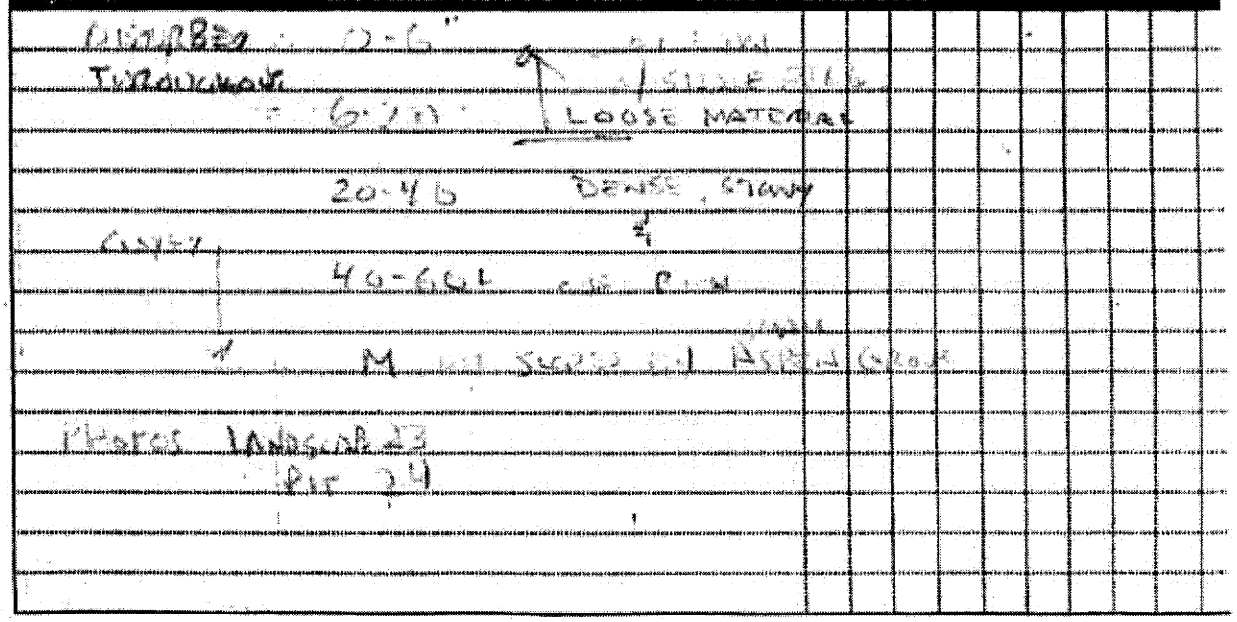
Erosion: Kind:	Degree:	Runoff:	Surface Frag %:	GR:	CB:	ST:	BD:	CN:	FL:	Diagnostic Horz. / Prop.:	Kind:	Depth:
NONE			Kind:	10	5	5	3	2				

P.S. Control Section:	Ave. Clay %:	Ave. Rock Frag %:	
Depth Range:	>35	>35	D-5 DUMP DISTURBANCE HAS NOT BEEN CUT TO 5 FEET INSIDE OF COAL WASTE ROCK DISTURBANCE SLOPE

VEGETATION :

SYMBOL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :



D-5
P-2

Map Unit Symbol: Date:

	Obser. Method	Depth (in) (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont. Col Mst Shp
1	↑	0 - 6	DISTURBED	1			GRV CL	30gr 50 SR	2M-C SBK	VH	FI	S	P	NONE
2		6 - 20	D2				GRV CL	35gr 15GR 10ST	2M-C SBK	VH	VFI	S	P	
3	BACKFILL	20 - 40	D3				CBK CL	25gr 25GR 10ST	3M C SBK	VH	VFI	VS	VP	
4	↓	40 - 68+	D4				CBV CL	15gr 30GR 15ST	MASSIVE	VH	EFI	VS	VP	
5														
6														
7														
8														
9														
10														

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1				2VF 1F						MIXED MINE DUMP FILL MATERIALS
2				2VF 1F						SILTSTONE, WEATHERED SANDSTONE FRAGMENTS
3				1VF						10-15% CARBON
4				—						↓ 15% CARBON
5										
6										
7										
8										
9	S-D									
10										

D-6

...ber(s):	Date:	Weather:	Temp.: Air: / Soil: Depth:	Latitude: ° ' " N / Longitude: ° ' " W	Datum:	Location: Sec. T. R.
BC	10-14-06	CLOUDY	52			

Zone:	mE:	mN:	Topo Quad.:	Site ID:	YR:	State:	County:	Pedon #:	Soil Survey Area:	MLRA / LRU:	Transect: ID: / Stop #: Interval:
	0486825	4398031				UT	CARBON		KUNEY		

...cape:	Landform:	Microfeature:	Anthro:	Elevation:	Aspect:	Slope (%):	Slope Complexity:	Slope Shape: (Up & Dn / Across)
MTN;	SIDESLOPE				260°	30	COMPLEX	R; GRADED AREA

...pe Profile Position:	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:	State Physio. Area:	Local Physio. Area:
LOWER							

...ge:	Flooding:	Ponding:	Soil Moisture Status:	Permeability: / Ksat:	Land Cover / Use:
WELL			MOIST	MODERATE	RABBITBRUSH

...Material:	Bedrock: Kind: Fract.: Hard.: Depth:	Lithostrat. Units: Group: Formation: Member:
COLLUVIUM W/ COAL DUMP		

...n: Kind: / Degree:	Runoff:	Surface Frag %:	GR:	CB:	ST:	BD:	CN:	FL:	Diagnostic Horz. / Prop.:	Kind:	Depth:
SLIGHT / SHEET		Kind:	10	12	3	4	2		OCHRIC		

...ontrol Section: *Ave. Clay %:* *Ave. Rock Frag %:*

...h Range:

D-6 CRUSHING / SCREENING

VEGETATION :		
...BOL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

SAMPLED BELOW COAL AND 6" ABOVE

COAL-AFFECTED LAYER CONTAINS SUBSTRATE FRAGMENTS AND VARIES FROM 10-20 INCHES ACROSS TALUS FACE

SAMPLE 0-7" SAMPLE

PHOTO #17 7-24" X NOT PETROX

24-43" SAMPLE

48-72" SAMPLE

- EXTREMELY STONY SUBSOIL AFFECTED BY RECLAMATION [illegible] FROM PREVIOUS WORK

D-6
P-2

Map Unit Symbol: Date:

	Obser. Method	Depth (in) (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont. Col Mst Shp Loc
1		0-6	A				CB CL	10g 10cb 5st	2m-f sbk	sh	fr	ss	ps	
2		6-24	AC diamicton	clear			stv	15g 20c 15st	massive					
3	Bx1	24-48	C2				stv CL	20g 20c 15st	2m-f sbk	vh	vfi	s	p	
4	Bx1	48-72	C3				stv CL	25gr 20cb 10st	2f abk	eh	fi	s	p	
5	Bx1													
6														
7														
8														
9														
10														

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1				1 VF, 1F						SOME FRAGMENTS, SOME ORGANICS.
2				1VF						75% coal fragments
3				1VF						<15% coal fragments
4				1F 1M						<15% coal
5										
6										
7										
8										
9										
10	9-0									

Longitude:

Zone:	mE:	mN:	Topo Quad.:	Site ID:	YR:	State:	County:	Pedon #:	Soil Survey Area:	MLRA / LRU:	Transect: ID: D-7
04	86843	4398018				UTAH	CARBON				Stop #: Interval:

...ape:	Landform:	Microfeature:	Anthro:	Elevation:	Aspect:	Slope (%):	Slope Complexity:	Slope Shape: (Up & Dn / Across)
[illegible]	SIDESLOPE			2375M	280°	28	COMPLEX	CONCAVE

...e Profile Position:	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:	State Physio. Area:	Local Physio. Area:
LOWER							

...ge:	Flooding:	Ponding:	Soil Moisture Status:	Permeability: / Ksat:	Land Cover / Use:
Well	NONE		MOIST TO 14"	MODERATE	RABBITBRUSH - GRASS

Material:	Bedrock: Kind: Fract.: Hard.: Depth:	Lithostrat. Units: Group: Formation: Member:
COLLUVIUM	—	

...: Kind: Degree:	Runoff:	Surface Frag %: Kind:	GR:	CB:	ST:	BD:	CN:	FL:	Diagnostic Horz. / Prop.: Kind: Depth:
SLIGHT			10	5	5		3		—

...ntrol Section: Ave. Clay %: > 30% Ave. Rock Frag %: 45% Range:

D-7 COLLUVIAL - SPRING AREA

VEGETATION :

...OL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

SAMPLE DEPTHS 0-6"

6-28"

ALL DISTURBED

28-42"

42-58"

BURIED SOIL ↓ 58-75"

B HORIZON

TEXTURALLY CLAYIER UPPER 2 FEET

MORE FRAGMENTS ... 60"

PHOTO # 19 (P)

D-7
P-2

Map Unit Symbol: Date:

Obser. Method	Depth (in) (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont. Col Mst Shp Loc
	0-6.	D1				CB CLAY	10gr 10cb Sst	2M-F SBK					NONE
	6-20	D2				CBV CL	15 nF 3 Pb 3 st	2 c-M SBK					
	20-42	D3				CBV CL	25gr 20cb 5st	2FM SBK					
	42-58	D4				CBV CL	2M-F NSBK	VF-F 5st 25cb					
	58-75+	B6				CB LOAM	MI SSBK	15cb 3gr					

Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
			VF IF					MIX-	OC GRAVELLY MINERAL SOIL W/ SOME CHARCOAL
			VF IF						DISCARD
			VF						< 10% CHAR
			VF-F						10% CHAR + 15% WEATHERED SED. MATERIAL
			VF						BURIED B
L-D									

D-8

USDA-NRCS **PEDON DESCRIPTION** Pedon ID # : Draft Mar-02

Series or Component Name:	Map Unit Symbol:	Photo #:	Classification:	Soil Moist. Regime (Tax.):
				USTIC

Describer(s):	Date:	Weather: Temp.: Air:	Latitude: ° ' " N Datum:	Location:
BC	10-15-06	CLEAR 45° Soil: Depth:	Longitude: ° ' " W	Sec. T. R.

UTM: Zone: mE: mN:	Topo Quad.:	Site ID: YR: State: County: Pedon #:	Soil Survey Area:	MLRA / LRU:	Transect: ID: Stop #: Interval:
04 486812 4398013		UTAH CARBON D-8			

Landscape:	Landform:	Microfeature:	Anthro:	Elevation:	Aspect:	Slope (%):	Slope Complexity:	Slope Shape: (Up & Dn / Across)
MTN.	SIDESLOPE			2382m	260°	43	COMPLEX	CONCAVE

Hillslope Profile Position:	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:	State Physio. Area:	Local Physio. Area:
LOWER							

Drainage:	Flooding: Ponding:	Soil Moisture Status:	Permeability: Ksat:	Land Cover / Use:
WELL		MOIST TO 13"	MODERATE	ASPEN - SYSP DRFC

Parent Material:	Bedrock: Kind: Fract.: Hard.: Depth:	Lithostrat. Units: Group: Formation: Member:
COLLUVIUM -	[illegible] FM	

Erosion: Kind: Degree:	Runoff:	Surface Frag %: GR: CB: ST: BD: CN: FL: Kind:	Diagnostic Horz. / Prop.: Kind: Depth:
SLUMP SLIGHT		5 3 3 2 2	MOLLIC ANTHRIC 0-13 13-48"

P.S. Control Section: Ave. Clay %: Ave. Rock Frag %: Depth Range:	D-8
20-35% <35%	

VEGETATION :

SYMBOL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

SAMPLED D-6

6-13

13-26"

26-45

L[illegible] TOO STONY NOT SAMPLED

O; 1/2:0 DISCONTINUOUS LEAF LITTER

PUNCH (P) 20:1

Component Name: | Map Unit Symbol: | Pedon: D-8 p-2

	Obser. Method	Depth (in) (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont. Col Mst Shp
1		0 - 6	A				Loam	5gr 3cb 3st	1F GR	SO	VFR	NS	NP	NONE
2		6 - 13	BA				CB Loam	5gr 2cb 5st	1F-M GR	SO	VFR	NS	NP	
3	BA cutan	13 - 26	Bt				CB CL	10gr 10cb 5st	1F-M SBK	HA	FI	SS	SP	
4		26 - 48	Bt2				STV CL	15cb 15st 5gr	2M SBK	HA	VFI	SS	SP	
5		48 - 78	C				STX LOAM	25st 15cb 15gr	MASSIVE	VH	VFI	SS	PS	
6														
7														
8														
9														
10														

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1				2VF 1F 2M						
2				2VF, 1F 1M						
3				1VF-F 1M						
4				1F						
5				1VF						NOT SMOOTH OR WAVINESS
6										
7										
8										
9										
10	8-a									

D-9A

USDA-NRCS

PEDON DESCRIPTION

Pedon ID # :

Draft

Mar-0

Series or Component Name:	Map Unit Symbol:	Photo #:	Classification:	Soil Moist. Regime (Tax.):

Describer(s):	Date:	Weather: Temp.: Air:	Soil: Depth:	Latitude: ° ' " N Datum:	Longitude: ° ' " W	Location: Sec. T. R.
BC	10-15-06	CLEAR 56°				

UTM: Zone: mE: mN:	Topo Quad.:	Site ID: YR: State: County: Pedon #:	Soil Survey Area:	MLRA / LRU:	Transect: ID: Stop #: Interval:
0486867 4398243		UT EMERY D-9A			

Landscape:	Landform:	Microfeature:	Anthro:	Elevation:	Aspect:	Slope (%):	Slope Complexity:	Slope Shape: (Up & Dn / Across)
MTN	LOWER			2367M	270°	19	SINGLE	PLANAR → SL CONCAVE

Hillslope Profile Position:	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:	State Physio. Area:	Local Physio. Area:

Drainage:	Flooding:	Ponding:	Soil Moisture Status:	Permeability:	Land Cover / Use:
MODERATE			MOIST	MOD	

Kwat:

Parent Material:	Bedrock: Kind: Fract.: Hard.: Depth:	Lithostrat. Units: Group: Formation: Member:
WASTE DUMP	NONE	

Erosion: Kind: Degree:	Runoff:	Surface Frag %: GR: CB: ST: BD: CN: FL: Kind:	Diagnostic Horz. / Prop.: Kind: Depth:
			DISTURBED NEAR DUP RR

P.S. Control Section: Ave. Clay %: Ave. Rock Frag %:

Depth Range: 15-30% AFC

D-9A DISTURBED DUMP SITE CONSIST BY 15" WASTE ROCK & SOIL MIX

VEGETATION :

SYMBOL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

CWL DUMP 0-6 OVERBURDEN

6-15

15-30 COAL NOT SAMPLED

BURIED NATIVE SOIL DARK W/ FEW CM FWG

SAMPLED 0-6 BULK

— COAL —

30-95"

95-115

115-140+

PHOTOS 23-24 + END OF ROLL

D-9A
P-2

Component Name:

	Obser. Method	Depth (in) (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont. Col Mst Shp
1	BACKHOE ↕	0-6	DISTURBED				GN CL	15 gr 5 cb	1+ 2M-F SBK					
2		6-15	DIST 2				CL	25 GR 10 CB	2M SBK					
3		15-80	Coal				COAL	FINE + CHUNKS	MASSIVE					
4	AUGER	80-95	Ab				Loam	15 GR 10 COAL	1M-F GR					
5	AUGER	95-115	Btb				L+	5 GR 5 COAL	2M-F SBK					
6	AUGER	115-140	BtCb				Loam	15 g 5 CB	2M SBK					
7														
8														
9														
10														

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1				2vF 1F						MIXED SUBSOIL & [illegible]
2				1vF 1F						
3				/						COAL BURIED
4				/						NATIVE B [illegible]
5				/						NATIVE
6										
7										
8										
9										
10	V[illegible]-D									

D-9B

USDA-NRCS **PEDON DESCRIPTION** Pedon ID # : Draft Mar-02

Series or Component Name:	Map Unit Symbol:	Photo #:	Classification:	Soil Moist. Regime (Tax.):

Describer(s):	Date:	Weather: Temp.: Air: Soil: Depth:	Latitude: ° ' " N Datum: Longitude: ° ' " W	Location: Sec. T. R.
BC	10-15-06			

UTM: Zone: mE: mN:	Topo Quad.:	Site ID: YR: State: County: Pedon #:	Soil Survey Area:	MLRA / LRU:	Transect: ID: Stop #: Interval:
		D-9B			

Landscape:	Landform:	Microfeature:	Anthro:	Elevation:	Aspect:	Slope (%):	Slope Complexity:	Slope Shape: (Up & Dn / Across)
MTN.	SIDESLOPE				300	22"		COMPLEX

Hillslope Profile Position:	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:	State Physio. Area:	Local Physio. Area:
LOWER							

Drainage:	Flooding:	Ponding:	Soil Moisture Status:	Permeability: Kest:	Land Cover / Use:
MOD. WELL					RABITBRUSH

Parent Material:	Bedrock: Kind: Fract.: Hard.: Depth:	Lithostrat. Units: Group: Formation: Member:
COLLUVIUM / WASTE ROCK	CAP DUMP	

Erosion: Kind: Degree:	Runoff:	Surface Frag %: GR: CB: ST: BD: CN: FL: Kind:	Diagnostic Horz. / Prop.: Kind: Depth:

P.S. Control Section: Ave. Clay %: Ave. Rock Frag %: Depth Range:	D9-B

VEGETATION :

SYMBOL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

DISTURBED DUMP AREA

SAMPLED 3 0-6 } SUBSOIL REPLACED DISTURBED
6-11 }
52-80" BURIED NATIVE SOIL
80-102"

D-98
P-2

Component Name: | Map Unit Symbol: | Date:

	Obser. Method	Depth (in) (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Mst	Stk	Pls	Mottles % Sz Cont. Col Mst Shp
1	Auger	0-11	MIXED SUBSOIL OVER WASTE MATERIAL				GRV CL	LOCAL 10YR 3/1						
2	Backhoe Pit	11-29	COAL FINES W/ SUBSOIL		50-75%			1SGR 1OCB						
3		29-52	COAL W/ SUBSOIL		95%			TR GR.						
4		52-80	Bb				LOAM	—						
5	Auger	80-95	Bb				GR L	1SG 10CB						
6	Auger													
7														
8														
9														
10														

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1				2VF 1F						
2				2VF 1F						
3				3VF						NOT SAMPLED
4				—						
5				—						AUGER REJECTED
6				0F						
7										
8										
9										
10										

Tb-T

D-10

USDA-NRCS

PEDON DESCRIPTION

Pedon ID # :

Draft Mar-02

Series or Component Name:	Map Unit Symbol: D-10	Photo #:	Classification:	Soil Moist. Regime (Tax.):
Describer(s): BC	Date: 10-5-06	Weather: Temp.: Air: SUNNY 60° Soil: Depth:	Latitude: ° ' " N Datum: Longitude: ° ' " W	Location: Sec. T. R.
UTM: Zone: 12 mE: 0486915 mN: 4398318	Topo Quad.:	Site ID: YR: State: UT County: CARBON Pedon #: D-10	Soil Survey Area: KINNEY	MLRA / LRU: Transect: ID: Stop #: Interval:
Landscape: MTN	Landform: SIDE SLOPE	Microfeature:	Anthro:	Elevation: 2380M Aspect: 300° Slope (%): 14 Slope Complexity: Slope Shape: (Up & Dn / Across)
Hillslope Profile Position:	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province: Physio. Section: State Physio. Area: Local Physio. Area:
Drainage:	Flooding: Ponding:	Soil Moisture Status:	Permeability: Keat:	Land Cover / Use: ASPEN - SAGEBRUSH
Parent Material: COLLUVIUM FLUVIAL MIXED SEDIMENTARY	Bedrock: Kind: Fract.: Hard.: Depth:		Lithostrat. Units: Group: Formation: Member:	
Erosion: Kind: Degree: NONE	Runoff:	Surface Frag %: GR: CB: ST: BD: CN: FL: Kind:		Diagnostic Horz. / Prop.: Kind: Depth:
P.S. Control Section: Ave. Clay %: Ave. Rock Frag %: Depth Range: >35%	D-10 SLOPE CUT BACK BY OLD MINEWORKS			

VEGETATION :

SYMBOL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

SAMPLED 05

5-11"

ALL MIXED

COMPOSITES 11-23 } MIXED

OF COLLUVIAL

SUBSOILS 23-35 } COLLUVIAL MAT

35-60 NOT SAMPLED TOO STONY

D-10
p-2

	Obser. Method	Depth (in) (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont. Col Mst Shp
1		0 - 5	A				LOAM	Sgr 3cB	2M-F GR	SO	FR	SO	PO	
2	[illegible]	5 - 11	Bt1				CL		2M-F ABK	SH	FI	SS	PS	
3	[illegible]	11-23	Bt2				CL		2M-F ABK	HA	FI	S	P	
4	[illegible]	23-45	Bt3				CLAY		3C ABK	H	VFI	VS	VP	
5	[illegible]	45-65+	C				LOAM		MASSIVE	VH	VFI	VS	VP	
6														
7														
8														
9														
10														

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1				1VF 2F 1M 1C						Soil SFC from ABANDONED MINE
2				1VF 1F 1M-C						w/ 10% COAL FRAGS
3				1VF-F 1M						OLD COLLUVIAL
4				1F						
5				/						
6										
7										
8										
9										
10	01-D									

Scriber(s): BC	Date: 10-16-06	Weather: 41°	Temp.: Air: SUNNY Soil:	Depth:	Latitude: ° ' " N	Datum:	Location: Sec. T. R. D-11		
					Longitude: ° ' " W				
Zone: 12	mE: 0486825	mN: 4398837	Topo Quad.:	Site ID: YR:	State: UTAH	County: CARBON	Pedon #: D-11	Soil Survey Area: KANE	MLRA / LRU:
Transect: ID: Stop #: Interval:									

Escape: TOE SLOPE	Landform: MTN	Microfeature:	Anthro:	Elevation: 2349M	Aspect: 298°	Slope (%): 11%	Slope Complexity: COMPLEX	Slope Shape: (Up & Dn / Across) CONCAVE
Slope Profile Position: LOWER	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:	State Physio. Area:	Local Physio. Area:	
Stage: SRO	Flooding:	Ponding: YES	Soil Moisture Status: WET	Permeability: MODERATE Ksat:	Land Cover / Use: RANGELAND			
Dnt Material: COLLUVIUM / WASTE SUBSOIL / COAL	Bedrock: Kind:	Fract.:	Hard.:	Depth:	Lithostrat. Units: Group:	Formation:	Member:	
Con: Kind: Degree:	Runoff:	Surface Frag %: GR:	CB:	ST:	BD:	CN: FLCOAL	Diagnostic Horz. / Prop.: Kind:	Depth:
Control Section: Ave. Clay %: >35% Ave. Rock Frag %: >45% Below 60" Kind:								
Depth Range:	D-B 11 WET AT BASE OF SLOPE	MAY BE OUTSIDE LEASED BNF TO WEST SLIGHTLY 70" TO WATER TABLE						

VEGETATION :

SYMBOL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

SAMPLED 0-12"

COAL 12-62 NOT SAMPLED

62-80" SAMPLED THROUGH BASE OF STEEP >35%

80+ NOT SAMPLED AUGERED 20 INTO COAL

70" WATER STANDING IN PIT

20 FT FROM OLD RR TRACKS. THIS MAY BE JUST BEYOND LEASE AREA TO WEST

D-11
P-2

Component Name:				Map Unit Symbol:		Date:

	Obser. Method	Depth (in) (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont. Col Mst Shp Loc
1	PIT EXPOSURE	0-12	SUBSOIL RECLAIMED				GRV CL	15GR 3SB LOAM						8%
2		12-62	CLOSE W/ SOME SUBSOIL MIXED					15GR						90%
3	PIT EXPOSURE	62-80	NATIVE SOIL				GRV CLAY	3 LOAM 15CB	Blost NA					25% CLAY
4	SOIL PROFILE	80-90+					GRV CLAY	4 LOAM 25CB	MASSIVE					
5														
6														
7														
8														
9														
10														

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1				2vF 1F						
2				1vF 1F						
3				/						
4				/						Below water table
5										
6										
7										
8	11-9									

D-12

SDA-NRCS | **PEDON DESCRIPTION** | Pedon ID #: | Draft | Mar-02

...s or Component Name:	Map Unit Symbol:	Photo #:	Classification: Pachic Argiustoll, Fine Loamy	Soil Moist. Regime (Tax.): Ustic
...riber(s): BC	Date: 10-15-06	Weather: RAW? Temp.: Air: 58° Soil: Depth:	Latitude: ° ' " N Longitude: ° ' " W Datum:	Location: Sec. T. R.
... Zone: 12 mE: 0486774 mN: 4397969	Topo Quad.:	Site ID: YR: State: Utah County: Carbon Pedon #: D-12	Soil Survey Area: Kinney MLRA / LRU:	Transect: ID: Stop #: Interval:
...lscape: Mountain	Landform: Sideslope	Microfeature:	Anthro:	Elevation: 2370 m Aspect: 330° Slope (%): 22 Slope Complexity: Single Slope Shape: (Up & Dn / Across) Concave
...lope Profile Position: Toeslope	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province: Physio. Section: State Physio. Area: Local Physio. Area:
...nage: Well	Flooding:	Ponding:	Soil Moisture Status: Moist to 16"	Permeability: Moderate Ksat: Land Cover / Use: Aspen w/ Sagebrush, Snowberry
...nt Material: Mixed sedimentary colluvium	Bedrock: Rocks Kind: Fract.: Hard.: Depth:			Lithostrat. Units: Group: Formation: Member:
...ion: Kind: Degree:	Runoff:		Surface Frag %: GR: CB: ST: BD: CN: FL: Kind:	Diagnostic Horz. / Prop.: Pachic, Argillic Kind: Depth:
Control Section: Ave. Clay %: <35% Ave. Rock Frag %: <35% ...th Range:			Crushing - Sorting (Shooting Gallery)	

VEGETATION :

...MBOL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

Deep rockfree toeslope to 7½ ft

0 - 6' coal not affecting the surface here

6-14

14-28

28-48

48-66

D-12
P-2

Component Name: | Map Unit Symbol: | Date:

	Obser. Method	Depth (in) (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Mst	Stk	Pls	Mottles % Sz Cont. Col Mst Shp
1		0-6	A_1				GR SL	5 GR	2M-F GR	SO	VFR	SO	PO	
2		6-14	A_2				GR LOM	8 GR	2 MGR / 2M-F SBK	SO	FR	SO	PO	
3		14-28	BAT				GR CL-	14 GR 5 CB	3 F-M SBK	VH	VF	SS	PS	
4		28-48	B1/2				STK CL	25 GR 15 CB 15 ST	3 C-M SBK	EH	EF	VS	VP	
5		48-66+	BH3/C				CBK CL	35 GR 20 CB 10 ST	MASSIVE	EH	EF	VS	VP	
6														
7														
8														
9														
10														

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1				3 F 1C 2F 2M						1/2-0" LEAF DISCOL. LITTER
2				3 VF 2F 1M 1C						
3				2 VF 1F						
4				1 VF						SOME WEATHER SILT AND SS FRAGMENTS
5				V 1 VF						WEATHERING CHUNKS OF SANDSTONE
6										
7										
8										
9										
10										

61-0

1A-2

SDA-NRCS

PEDON DESCRIPTION

Pedon ID # :

Draft Mar-02

s or Component Name:	Map Unit Symbol:	Photo #:	Classification:		Soil Moist. Regime (Tax.):
riber(s): BL	Date: 10-15-06	Weather: Temp.: Air: 52° Soil: Depth:	Latitude: ° ' " N Datum: Longitude: ° ' " W	Location: Sec. T. R.	
Zone: mE: mN: 0486932 4398464	Topo Quad.:	Site ID: YR: State: UTAH County: CARBON Pedon #: 1A-2	Soil Survey Area: KINNEY	MLRA / LRU:	Transect: ID: Stop #: Interval:
scape: MTN	Landform: SLOPE	Microfeature:	Anthro:	Elevation: 2380M	Aspect: 320°
Slope (%): 30%	Slope Complexity: COMPLEX	Slope Shape: (Up & Dn / Across) CONVEX			
ope Profile Position: LOWER	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:
State Physio. Area:	Local Physio. Area:				
age: WELL	Flooding:	Ponding:	Soil Moisture Status: MOIST TO 20"	Permeability: MODERATE Ksat:	Land Cover / Use: ASPEN - ARTEMISIA
nt Material: COLLUVIUM	Bedrock: Kind: Fract.: Hard.: Depth:		Lithostrat. Units: Group: Formation: Member:		ROBERTSON SS
ion: Kind: Degree:	Runoff:	Surface Frag %: GR: CB: ST: BD: CN: FL: Kind: 5 2 2		Diagnostic Horz. / Prop.: MOLLIC Kind:	Depth:
Control Section: Ave. Clay %: <35% Ave. Rock Frag %: >35% th Range:	1A-2 LOWER TOESLOPE WITH 12-15" COAL ON SFC AND 1/2" LEAF LITTER				

VEGETATION :

ABOL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

COAL FNF 0-15" NOT SAMPLED

15-25 BURIED A

25-40"

40-60

60-75

75-90"

1A-2
P-2

Component Name: | Map Unit Symbol: | Pedon:

	Obser. Method	Depth (in) (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont. Col Mst Shp Loc
1		0-15	A											
2		15-25	Ab											
3		25-40	Bt											
4		40-60	BC											
5		60-75"	C1											
6		75-90"	C2											
7														
8														
9														
0														

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1										
2										
3										
4										
5										
6										
7										
8										
9										
0										

2A-1

USDA-NRCS

PEDON DESCRIPTION

Pedon ID # :

Draft

Mar-02

Series or Component Name:	Map Unit Symbol:	Photo #:	Classification:	Soil Moist. Regime (Tax.):
	2A-1		ARGIUSTOLL, FINE-LOAMY	USTIC

Describer(s):	Date:	Weather: Temp.: Air: CLOUDY	Latitude: ° ' " N Datum:	Location:
BC	10-14-06	60° Soil: Depth: 6½	Longitude: ° ' " W	Sec. T. R.

UTM: Zone: mE: mN:	Topo Quad.:	Site ID: YR: State: County: Pedon #:	Soil Survey Area:	MLRA / LRU:	Transect: ID: Stop #: Interval:
0486811 4397900		UTAH CARBON			

Landscape:	Landform:	Microfeature:	Anthro:	Elevation:	Aspect:	Slope (%):	Slope Complexity:	Slope Shape: (Up & Dn / Across)
MTN.	TOESLOPE			2372 M	270°	27	SIMPLE	LONGWAVE

Hillslope Profile Position:	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:	State Physio. Area:	Local Physio. Area:
LOWER							

Drainage:	Flooding: Ponding:	Soil Moisture Statue:	Permeability: Kast:	Land Cover / Use:
WELL		MOIST TO 15"		GRASS + SAGEBRUSH

Parent Material:	Bedrock: Kind: Fract.: Hard.: Depth:	Lithostrat. Units: Group: Formation: Member:
COLLUVIUM	BACCHANTE FM /	

Erosion: Kind: Degree:	Runoff:	Surface Frag %: GR: CB: ST: BD: CN: FL: Kind:	Diagnostic Horz. / Prop.: Kind: Depth:
NONE	MODERATE	12 2 3 2 10	MOLLIC ARGILLIC

P.S. Control Section: Ave. Clay %: Ave. Rock Frag %: Depth Range:	
25-30%	2A-1 TRANSFER

VEGETATION :

SYMBOL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

SAMPLED 5 INCREMENTS 0-10"
10-24"
24-44"
44-65"
65-90 INCHES

BACCHANTE PIT!
6½ FEET PHOTO (P) #15

SOIL MIXING FROM LANDSLIDE MOVEMENT.
MASS WASTING BELOW 44"
HORIZONS INDISTINCT BELOW THIS DEPTH
IN SITU
WEATHERING OF SS + SHALE IN LOWER 2 HORIZONS

2A-1
P-2

Component Name: | Map Unit Symbol: | Site:

	Obser. Method	Depth (in)	Depth (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont. Col Mst Shp
1	Pit	0	10	A					10 GR 5 CB	1M-F GR					
2	"	10	24	AB					15 GR 5 CB	2M-F SBK					
3	"	24	44	Bt					15 GR 15 CB 5 ST	3M-F SBK					
4	"	44	65	Bt/C					20 GR 15 GR 10 ST 5DY	MA					
5	"	65	80+	C					20 GR 10 CB 15 ST 5 GY	MASSIVE					
6															
7															
8															
9															
10															

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1				3 VF IF						
2				2 VF, IF						
3				1 VF IF						
4				VI VF						
5				1 F						
6										
7										
8										
9										
10	1 F/C									

Describer(s):	Date:	Weather: Temp.: Air:	Latitude: ° ' " N	Datum:	Location:
BC	10-14-06	cloudy Soil: Depth:	Longitude: ° ' " W		Sec. T. R. 2A-2

UTM: Zone:	mE:	mN:	Topo Quad.:	Site ID: YR:	State:	County:	Pedon #:	Soil Survey Area:	MLRA / LRU:	Transect: ID:
12	0486835	4397839			UTAH		2A-2	KINNEY		Stop #: Interval:

Landscape:	Landform:	Microfeature:	Anthro:	Elevation:	Aspect:	Slope (%):	Slope Complexity:	Slope Shape: (Up & Dn / Across)
MOUNTAIN	SIDESLOPE					2-4	SINGLE	PLANAR -> SL. CONCAVE

Hillslope Profile Position:	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:	State Physio. Area:	Local Physio. Area:
MIDDLE -> LOWER							

Drainage:	Flooding:	Ponding:	Soil Moisture Status:	Permeability:	Land Cover / Use:
MODERATE			MOIST TO 15"	MOD Ksat:	GRASS & SAGEBRUSH

Parent Material:	Bedrock: Kind:	Fract.:	Hard.:	Depth:	Lithostrat. Units: Group:	Formation:	Member:
COLLUVIUM FROM SANDSTONE							

Erosion: Kind:	Degree:	Runoff:	Surface Frag %: GR:	CB:	ST:	BD:	CN:	FL:	Diagnostic Horz. / Prop.: Kind:	Depth:
NONE			Kind: 15	5	3	4			MOLLIC	

P.S. Control Section: Ave. Clay %:	Ave. Rock Frag %:	
Depth Range: 25-36"		2A-2 TRANSFER

VEGETATION :

SYMBOL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

BACKHOE PIT / TRANSMISSION LINE RT
5½ FT DEEP

SAMPLED 0-5 2A-2
5-14 <25% slope
14-25
25-38
38+ NO SAMPLE

Photos # 17 (4)

2A-2
P-2

Pedon/Soil Description | Pedon/Soil Symbol: | Date:

	Obser. Method	Depth (in) (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont. Col Mst Shp
1		0-5	A1				Loam	5gr 5cb	2M·GR	SO	VFR	SO	PO	
2		5-14	A2				GR L	10gr 5cb	2M·F GR	SO	FR	SO	PO	
3	BW	14-25	BW				GR Loam	15gr 10cB 5st	2M SBK	HA	VFI	SS	PS	
4	BC	25-38	B/C				GRV Loam	20gr 10B 5st 5CH	2F·M ABK	HO	VFI	S	PS	NO
5	C	38-60+	C2				STX CL	20gr 10B 25st 10CH	MASSIVE	VH	VFI	SS	PS	
6														
7														
8														
9														
10														

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1				3VF. 2F. M						
2				2VF 2F. M						
3				1VF						MIXED CARBONATE & NON-CARBONATE SEDIMENTS PIECES OF ROCK
4				/						
5				V, VF						
6										
7										
8										
9										

ave

Zone:	mE:	mN:	Topo Quad.:	Site ID:	YR:	State:	County:	Pedon #:	Soil Survey Area:	MLRA / LRU:	Transect: ID:	Stop #:	Interval:
048696	4398624		10-15-06					2A-3	KINNEY		2A-3		

Landscape:	Landform:	Microfeature:	Anthro:	Elevation:	Aspect:	Slope (%):	Slope Complexity:	Slope Shape: (Up & Dn / Across)
MTN	SIDESLOPE			2384M	300°	27%	SINGLE	CONCAVE

Slope Profile Position:	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:	State Physio. Area:	Local Physio. Area:
MIDDLE							

Drainage:	Flooding:	Ponding:	Soil Moisture Status:	Permeability:	Land Cover / Use:
WELL			MOIST TO 13"	MODERATE Keat:	

Parent Material:	Bedrock: Kind:	Fract.:	Hard.:	Depth:	Lithostrat. Units:	Group:	Formation:	Member:
COLLUVIUM FROM SANDSTONE + SILTSTONE								

Erosion: Kind:	Degree:	Runoff:	Surface Frag %:	GR:	CB:	ST:	BD:	CN:	FL:	Diagnostic Horz. / Prop.:	Kind:	Depth:
MASS WASTING / SLUMPING			Kind:	10	5	2	2	2		MOLLIC		

Control Section: Ave. Clay %: Ave. Rock Frag %:

2A-3 NATIVE SOIL DEEPER A HORIZON UNDER SAGEBRUSH HUMMOCKS UP TO 10-16" DEPTH

Depth Range:

VEGETATION :

SOL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

SAMPLED 0-9"

9-19

19-36

36-52

52-70" NOT SAMPLED STONE LINE

MIXED COLLUVIUM

	Method	(in) (cm)			Dry	Moist		Knd % Rnd Sz	Grade Sz Type	Consistence Dry	Mst	Stk	Pls	Mottles % Sz Cont. Col Mst Shp Loc
1	PD	0 - 9	A				GR SLOAM	10qR SB	2M GR	SO	FR	SO	PO	NONE
2	1/0	9 - 19	Bt				GR LOAM	15qR 3CB	2F-M SBK	SH	FI	SS	PO	
3	PIT CUT	19-36	Btz				CBV CL	10q 15CB 10CN	2M-C ABK	VH	FI	S	P	
4	PIT CUT	36-52	C1				STV CL	15q 15C 20ST	3F-M SBK	EH	EF	S	P	
5	PIT CUT	52-75"	C2				PN CL	20ST 15DY	MASSIVE	EH	EF	V S	VP	
6														
7														
8														
9														
10														

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1				3VF ZF 1M						
2				1VF, 1F						
3				1VF, 1F						
4				1VF						WEATHERED CHERT COBBLES
5				1VF						WEATHERED SILTSTONE AND SANDSTONE COBBLES
6										
7										
8	E-VC									

Component Name: 2A-5 Stafford Sandy Map Unit Symbol: Date: 10-16-06

	Obser. Method	Depth (in)	Depth (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont Col Mst Shp Loc
1		0	6	A				SiL Loam	10gr 15st 15Bk	2M-F GR	SO	VFR	SO	SO	
2		6	12	B				SiL Loam	15gr 15st 15Bk	2 MSBK->M	SO	FR	PO	PO	
3		12	24	Bt				SiL C	10cb 10gr 15st	2M-F BK	HA			P	
4		24	43	Bt				CR CLAY	25g 15Bk	3M PR	EH	EF	VS	VP	common / LSD
5		43	65+	BC				CR CLAY	25g 10cb	3M-C MBK	EH	EF	"	VP	
6															
7															
8															
9															
0															

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1				3VF 2F						
2				2VF 1F 1M						
3				1VF						
4				1F						
5										
5										
7										
3										
1										
1	5-AZ									

2A-5

2A-5
P-2

LOAD - OUT SITE

BELOW RR TRACK 100 M SE OF SUPERIOR SPRING

SAGEBRUSH / RABBITBRUSH COMPLEX HUMMOCKY TOPOGRAPHY

28% 280° ASPECT

INTERM. ICE BOAT GRAVEL

BELOW ROAD TO TOWN

Topo Quad.:	Site ID:	YN:	State:	County:	Pedon #:	Soil Survey Area:	MLRA / LRU:	Transect: ID: / Stop #: / Interval:
WP 28 0486808 4397820			UT	CARBON	2A6	KINNEY		2A6

Landscape:	Landform:	Microfeature:	Anthro:	Elevation:	Aspect:	Slope (%):	Slope Complexity:	Slope Shape: (Up & Dn / Across)
MTN.	SLUMP/LANDSLIDE DEPOSIT			2379M	340°	23	COMPLEX	COMPLEX, HUMMOCKY

Hillslope Profile Position:	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:	State Physio. Area:	Local Physio. Area:
LOWER							

Drainage:	Flooding: / Ponding:	Soil Moisture Status:	Permeability: / Kast:	Land Cover / Use:
WELL		MOIST TO 15"	MODERATE	ARTRVA - GRASSES

Parent Material:	Bedrock: Kind: / Fract.: / Hard.: / Depth:	Lithostrat. Units: Group: / Formation: / Member:
COLLUVIUM	MIXED SEDIMENTARY	

Erosion: Kind: / Degree:	Runoff:	Surface Frag %: GR: / CB: / ST: / BD: / CN: / FL: / Kind:	Diagnostic Horz. / Prop.: Kind: / Depth:
SLIGHT		5 2 2 2 TR	FRAGIC ARGILLIC

P.S. Control Section: Ave. Clay %: / Depth Range:	Ave. Rock Frag %:	
21	35	NEWER RUBBLY INTO COLUMBINE MINE DEEP ROCK-FREE LANDSLIDE DEPOSIT ± 5' NE OF FENCELINE

VEGETATION :

SYMBOL	COMMON NAME	%GD COVER

MISCELLANEOUS FIELD NOTES / SKETCH :

SANDY 0-6"

6-12"

12-24

24-40

40-66

66-95+

SOME OF THE BEST-PRESERVED TOPSOIL ON PROJECT AREA

2A-6

P-2

	Obser. Method	Depth (in)	Depth (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont. Col Mst Shp Loc
1	↑	0	6	A1				L	Tr GR CB	2M 1 GR	SO	VFR	SO	PO	
2	SLOPE,	6	17	A2				L	3 GR 2 CB	1M SBK → MGR	SO	FR	SO	PO	
3	PROD CUT	12	21	BW1				CL	5 GR 3 CB	2M F SBK	SO	FI	SS	PO	
4	LOAMY	21	40	BW2				LOAM	5 GR 3 CB	2M SBK	SH	FI	SS	PO	
5	↓	40	66	C				GR LOAM	10 GR + CB	2M C SBK	SH	FI	SS	PO	
6	↓	66	85+	C				LOAM	20 GR + CB	MASSIVE	HA	FI	SS	PO	
7									5% + GR						
8															
9															
10															

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1				3VF 2F 1M						
2				2VF 1F M						
3				VF 1F						
4				VF						BEGIN CHANGE
5				VF						W/ BLEACHED SS AND FEW BANDS
6										
7										
8	9-AC									
9										

GPS UTM 11 721100 2B & 2B-1

DA-NRCS

PEDON DESCRIPTION

Pedon ID # :

Draft Mar-02

s or Component Name:		Map Unit Symbol: 2B-1	Photo #:	Classification:							Soil Moist. Regime (Tax.):
riber(s): BC	Date: 10-14-06	Weather:	Temp.: Air: CLOUDY Soil:	Depth:	Latitude: ° ' " N	Datum:	Location: Sec. T. R.				
Zone: 12	mE: 0486911	mN: 4297900	Topo Quad.:	Site ID: YR:	State: UT	County: CARBON	Pedon #:	Soil Survey Area: KINNEY MINE	MLRA / LRU:	Transect: ID: Stop #: Interval:	
scape:	Landform: MTN SLOPE	Microfeature:	Anthro:	Elevation: 2404 M	Aspect: 280	Slope (%): 46	Slope Complexity: PLANAR	Slope Shape: (Up & Dn / Across) STRAIGHT			
ope Profile Position: MIDDLE - LOWER	Geom. Component:	Microrelief:	Physio. Division:	Physio. Province:	Physio. Section:	State Physio. Area:	Local Physio. Area:				
age: WELL	Flooding:	Ponding:	Soil Moisture Status: DRY	Permeability: Ksat: MODERATE	Land Cover / Use: GRASS / BRUSH						
t Material: COLLUVIUM	Bedrock: Kind: BUCK HORN FM.	Fract.:	Hard.:	Depth:	Lithostrat. Units: Group:	Formation:	Member:				
ion: Kind:	Degree: SLIGHT	Runoff: RAPID	Surface Frag %: GR:	CB:	ST:	BD:	CN:	FL:	Diagnostic Horz. / Prop.: MOLLIC	Kind:	Depth:
Control Section: Ave. Clay %: th Range:	Ave. Rock Frag %: 25	2B-1 TRANSPORT ROUTE, SWITCHBACK									

VEGETATION :

SBOL	COMMON NAME	%GD COVER
	SAGEBRUSH	
	SERVICEBERRY	
	RABBITBRUSH	
	GRASSES	

MISCELLANEOUS FIELD NOTES / SKETCH :

SAMPLED INCREMENTS

PHOTO POINT CAMERA (P)

#14 PT

SOILS BELOW 19 MIXED MASSIVE + COLLUVIUM MEETING ALLUVIUM @ 1.5'

Component Name: | Map Unit Symbol: | Pit # 2B-1 P-2

	Obser. Method	Depth (in) (cm)	Horizon	Bnd	Matrix Color Dry	Matrix Color Moist	Texture	Rock Frag Knd % Rnd Sz	Structure Grade Sz Type	Consistence Dry	Consistence Mst	Consistence Stk	Consistence Pls	Mottles % Sz Cont. Col Mst Shp Loc
1		0 - 9	A				L-m	3gr 10CB SSt						None
2		9 - 19	Bt				CL	10gr 10CB SSt						
3		19-33	Bt				CL	10gr 15CB 10St						
4		33-51	BC				CL	15gr 15CB 15St						
5		51-80	Cr		SANDSTONE COLLUVIUM MIXED WITH WEATHERED SED									Bench Withdrawn Fm
6		80+	R		HARD SANDSTONE BEDROCK									
7														
8														
9														
0														

	Redoximorphic Features % Sz Cn Hd Sp Kd Loc Bd Col	Concentrations % Sz Cn Hd Sp Kd Loc Bd Col	Ped / V. Surface Features % Dst Cont Kd Loc Col	Roots Qty Sz Loc	Pores Qty Sz Shp	pH (meth)	Effer. (agent)	Clay %	CCE	Notes
1										
2										
3										
4										
5										
6										
7										
8										
9										
0	1-9E									

USDA - Forest Service

SOIL DESCRIPTION

(Reference FSH 2509.18)

01-SP-07

1. Map Unit Symbol	2. Family or Series	3. Date	4. By	5. Photo. No.	6. Stop No.	7. USGS Quad	8. Location:
3A	CUMMINGS ENDOAQUOLL, CO-LARMY	9-5-07	BC				Sec. ____ T. ____ R. ____

9. Area	10. Forest	11. Ranger District	12. State	13. County
KUNEY MINE			UT	CARBON

14. Parent Material	15. Bedrock Name	16. Elevation	17. Erosion: a. Kind	b. Class
WIND ALLUVIUM COLLUVIUM	MIXED		NONE	

18. Landform	19. Slope: a. %	b. Shape	c. Length	d. Aspect	20. Drainage Class	21. Surface Stone and Rock: a. GR	b. CB	c. ST	d. BY
FLOODPLAIN	3	CONCAVE	100'	180°	SPD	3	0	0	0

22. Potential Natural Vegetation	23. Annual Precipitation	24. Measured Soil Temperature	25. Water Table *(Depth)*
WEEDY WITH THISTLE			

HORIZON DESIGNATION (e)	DEPTH (b)	COLOR (c) Moist (1)	COLOR (c) Dry (2)	COLOR (c) Mottling (3)	LAB TEXTURE (d)	STRUCTURE (e)	CONSISTENCE (f) Dry (1)	CONSISTENCE (f) Moist (2)	CONSISTENCE (f) Wet (3)	SPECIAL FEATURES (g) Cutans (1)	SPECIAL FEATURES (g) % of Rock Fragments (2)	SPECIAL FEATURES (g) Roots (3)	SPECIAL FEATURES (g) Pores (4)	EFFER. CLASS (h)	LAB FIELD pH (i)	BOUNDARY (j)
D1	0-6	10YR 2/1	10YR 5/2		SL 10 2M	2F SBK	SH	FI	SO PO		GR-10 CB-0 ST-0	3VF 1F	2VF IN 1F TU	NE	7.3	C, W
D2	6-14	10YR 2/2	10YR 4/2		SL 19	2F SBK	SH	FI	SO PO		GR-5 CB-0 ST-0	2VF 1F	1VF IN 1F TU	NE	7.4	A, W
Ab	14-24	10YR 3/2	10YR 5/2	2FAINT 15%	LOAM SILT LOAM 22 18	MASSIVE	VH	VFI	SS PO		GR-0 CB-0 ST-0	1VF 1F	2VF IN	NE	7.7	
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					

26. Partical Size Control Section	a. Depth:	b. Average Clay %:	c. Average Rock Fragment Content:	27. Depth to Lithic or Paralithic Contact:
	10-24	16	4	>60 EST.

28. Diagnostic Horizons	a. Surface:	b. Subsurface:	29. Moist Control Section Depth:
	CUMULIC	—	10-40"

Previous edition ... lete.

FS-2500-1 (2/86)

USDA - Forest Service

SOIL DESCRIPTION

HAPLOARGOLL (Reference FSH 2509.18) 02-SP-07

1. Map Unit Symbol	2. Family or Series	3. Date	4. By	5. Photo. No.	6. Stop No.	7. USGS Quad	8. Location: Sec. ___ T. ___ R. ___
3A	FINE-LOAMY COMVILLE HAPLOXEROLL	95-07	BL				

9. Area	10. Forest	11. Ranger District	12. State	13. County
LINNEY #2				CARBON

14. Parent Material	15. Bedrock Name	16. Elevation	17. Erosion: a. Kind ___ b. Class ___
ALLUVIUM	MIXED		

18. Landform	19. Slope: a. % 7 b. Shape ___ c. Length ___ d. Aspect ___	20. Drainage Class	21. Surface Stone and Rock a. GR 0 b. CB 0 c. ST — d. BY 0
FLOODPLAIN TERRACE			

22. Potential Natural Vegetation	23. Annual Precipitation	24. Measured Soil Temperature	25. Water Table (Depth)
BIG SAGEBRUSH			45" +

HORIZON DESIGNATION (a)	INCH DEPTH (b)	COLOR (c) Moist (1)	COLOR (c) Dry (2)	COLOR (c) Mottling (3)	LAB TEXTURE (d)	STRUCTURE (e)	CONSISTENCE (f) Dry (1)	CONSISTENCE (f) Moist (2)	CONSISTENCE (f) Wet (3)	SPECIAL FEATURES (g) Cutans (1)	SPECIAL FEATURES (g) % of Rock Fragments (2)	SPECIAL FEATURES (g) Roots (3)	SPECIAL FEATURES (g) Pores (4)	EFFER. CLASS (h)	LAB FIELD pH (i)	BOUNDARY (j)
A1	0-6	10YR 3/2	10 YR 5/2	/	LOAM 16 20	2M-F SBK	SH	FR	SS PO	/	GR-0 CB-0 ST-0	3VF 1F 1M		NE	6.6	A,W
A2	6-17	10YR 3/3	10YR 5/3	/	L 18 22	2M SBK	SH	FR	SS PS	/	GR-0 CB-0 ST-0	2VF 1F		NE	6.8	A,S
A3	17-32	10YR 3/3	10YR 5/2	/	SILT LOAM 17 23	2M-C SBK	HA	FI	S PS	/	GR-3 CB-0 ST-0	1VF		NE	7.2	A,S
BW	32+	10YR 3/3	10YR 5/3	/	SIL LOAM 22 25	2C-M SBK	SH	FI	S PS	/	GR-0 CB-0 ST-0	1VF		NE	7.4	
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					

26. Partical Size Control Section	a. Depth:	b. Average Clay %:	c. Average Rock Fragment Content:	27. Depth to Lithic or Paralithic Contact:

28. Diagnostic Horizons	a. Surface:	b. Subsurface:	29. Moist Control Section Depth:

Previous edition ___ lete.

FS 2500-1 (2/86)

USDA - Forest Service

SOIL DESCRIPTION

(Reference FSH 2509.18)

03-SP-07

1. Map Unit Symbol	2. Family or Series	3. Date	4. By	5. Photo. No.	6. Stop No.	7. USGS Quad	8. Location: Sec. ___ T. ___ R. ___
3A	FLOAMY CUMMULIC HAPLOCRYOLL	9-5-07	BC				

9. Area	10. Forest	11. Ranger District	12. State	13. County
KINNEY #2			UTAH	CARBON

14. Parent Material	15. Bedrock Name	16. Elevation	17. Erosion: a. Kind ___ b. Class ___
ALLUVIUM	—		

18. Landform	19. Slope: a. % 3 b. Shape CONCAVE c. Length 200 d. Aspect 350	20. Drainage Class	21. Surface Stone and Rock: a. GR ___ b. CB ___ c. ST ___ d. BY ___
FLOODPLAIN		SPD	

22. Potential Natural Vegetation	23. Annual Precipitation	24. Measured Soil Temperature	25. Water Table *(Depth)*
SEDGES & GRASS			

HORIZON DESIGNATION (a)	INCHES DEPTH (b)	COLOR (c) Moist (1)	COLOR (c) Dry (2)	COLOR (c) Mottling (3)	LAB TEXTURE (d) %C	STRUCTURE (e)	CONSISTENCE (f) Dry (1)	CONSISTENCE (f) Moist (2)	CONSISTENCE (f) Wet (3)	SPECIAL FEATURES (g) Cutans (1)	SPECIAL FEATURES (g) % of Rock Fragments (2)	SPECIAL FEATURES (g) Roots (3)	SPECIAL FEATURES (g) Pores (4)	EFFER. CLASS (h)	LAB FIELD pH (i)	BOUNDARY (j)
	0-6	10YR 2/1	10YR 3/2	/	Lcosi 19	2M-F GR	SO	VFR	SO PO	/	GR-TR CB-0 ST-0	3VF 1FM	2VF IN 1FTU	NE	6.5	C,W
	6-11	10YR 4/1	10YR 3/2	/	Lcosi 18	2M-C GR	SO	FR	SS PO	/	GR-0 CB-0 ST-0	2VF 2F	3VF IN 1FT	NE	6.9	C,W
	11-20	10YR 4/3	10YR 3/2	1 PROM	Lcosi 21	2M-F SBK	SO	FI	SS PS	/	GR-/ CB-/ ST-/	1VF 1F	1VF IN 1FTU	NE	7.2	C,S
	20-40	10YR 5/3	10YR 4/2	2 PROM	Lcosi 21	3M-C SBK	SH	FI	SS PO	/	GR-/ CB-/ ST-/	1VF	1VF TO 1F IN	NE	7.6	
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					

26. Particle Size Control Section	a. Depth: 10-40	b. Average Clay %: 20	c. Average Rock Fragment Content: 0	27. Depth to Lithic or Paralithic Contact: >60" EST.
28. Diagnostic Horizons	a. Surface: MOLLIC	b. Subsurface: CAMBIC		29. Moist Control Section Depth: 10-40"

Previous edition ___ is obs.

FS-2500-1 (2/86)

NOT DISTURBED -04-SP-07

USDA - Forest Service

SOIL DESCRIPTION

(Reference FSH 2509.18)

1. Map Unit Symbol	2. Family or Series	3. Date	4. By	5. Photo. No.	6. Stop No.	7. USGS Quad	8. Location:
2A	LOAMY-SKEL TYPIC HAPLUSTOLL	9/5/07	BC				Sec. ____ T. ____ R. ____

9. Area	10. Forest	11. Ranger District	12. State	13. County
KINNEY MINE			UTAH	CARBON

14. Parent Material	15. Bedrock Name	16. Elevation	17. Erosion: a. Kind	b. Class
COLLUVIUM	SANDSTONE		NONE	

18. Landform	19. Slope: a. %	b. Shape	c. Length	d. Aspect	20. Drainage Class	21. Surface Stone and Rock a. GR	b. CB	c. ST	d. BY
FAN SLOPE	16	CONCAVE	120'	260°	WD	3C	3	1C	0

22. Potential Natural Vegetation	23. Annual Precipitation	24. Measured Soil Temperature	25. Water Table (Depth)
GRASSES, BIG SAGEBRUSH W/SNOWBERRY			

HORIZON DESIGNATION (a)	DEPTH (b)	COLOR (c) Moist (1)	COLOR (c) Dry (2)	COLOR (c) Mottling (3)	LAB TEXTURE (d)	STRUCTURE (e)	CONSISTENCE (f) Dry (1)	CONSISTENCE (f) Moist (2)	CONSISTENCE (f) Wet (3)	SPECIAL FEATURES (g) Cutans (1)	SPECIAL FEATURES (g) % of Rock Fragments (2)	SPECIAL FEATURES (g) Roots (3)	SPECIAL FEATURES (g) Pores (4)	EFFER. CLASS (h)	LAB FIELD pH (i)	BOUNDARY (j)
A1	0-6	10YR 3/2	10YR 5/3	/	SLOAM 1T 19	2M-F SBK	SO	VFR	SO PO	/	GR-2 CB-2 ST-0	1VF 2F 1M	2VF IN	NE	6.6	C, S
A2	6-11	10YR 3/3	10YR 5/2	/	STV LOAM 1T 20	3F-M ABK	VH	VFI	SS PS	/	GR-5 CB-20 ST-20	1VF 1F	2VF IN 1F TU	NE	6.6	G, W
Bw	11-20	7.5YR 5/4	7.5YR 6/4	/	STX SL CAM 18 17	3M-F ABK	VH	VFI	SS PS	/	GR-10 CB-20 ST-25	1VF	1VF TU	NE	6.7	G, W
C	20+0	7.5YR 5/4	7.5YR 6/2	/	SCL 21 15	MASSIVE	SH	FI	SO PO	/	GR-0 CB-5 ST-0	/	1VF IN 1VF TU	NE	6.9	
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					

26. Partical Size Control Section	a. Depth:	b. Average Clay %:	c. Average Rock Fragment Content:	27. Depth to Lithic or Paralithic Contact:
	10-40"	19%	39%	>60 EST

28. Diagnostic Horizons	a. Surface:	b. Subsurface:	29. Moist Control Section Depth:
	MOLLIC	CAMBIC	10-40"

Previous edition Obs.

FS-2500-1 (2/86)

USDA - Forest Service

SOIL DESCRIPTION

(Reference FSH 2509.18)

MISSING A HORIZON / DISTURBED

0.5-SP-07

1. Map Unit Symbol	2. Family or Series	3. Date	4. By	5. Photo. No.	6. Stop No.	7. USGS Quad	8. Location: Sec. ___ T. ___ R. ___
DA05	DISTURBED	9/5/07	BC				

9. Area	10. Forest	11. Ranger District	12. State	13. County
KINNEY MINE			UTAH	CARBON

14. Parent Material	15. Bedrock Name	16. Elevation	17. Erosion: a. Kind	b. Class
COLLUVIUM	SANDSTONE		NONE	

18. Landform	19. Slope: a. %	b. Shape	c. Length	d. Aspect	20. Drainage Class	21. Surface Stone and Rock a. GR	b. CB	c. ST	d. BY
TOESLOPE	4	PLANE	50'		WD	10	5	2	JR

22. Potential Natural Vegetation	23. Annual Precipitation	24. Measured Soil Temperature	25. Water Table (Depth)
GRASS + SAGEBRUSH SOIL SURFACE SCARRED			NONE

HORIZON DESIGNATION (a)	HORIZON DEPTH (b)	COLOR (c) Moist (1)	COLOR (c) Dry (2)	COLOR (c) Mottling (3)	LAB TEXTURE (d)	STRUCTURE (e)	CONSISTENCE (f) Dry (1)	CONSISTENCE (f) Moist (2)	CONSISTENCE (f) Wet (3)	SPECIAL FEATURES (g) Cutans (1)	SPECIAL FEATURES (g) % of Rock Fragments (2)	SPECIAL FEATURES (g) Roots (3)	SPECIAL FEATURES (g) Pores (4)	EFFER. CLASS (h)	LAB / FIELD pH (i)	BOUNDARY (j)
B	0-8	7.5YR 4/4	7.5YR 6/4	/	LOAM 22 27	2CPL 1FSBK	HA	VFI	S PS	/	GR-5 CB-3 ST-3	2VF 1F	2VF 1N 2F TV	NE	6.5	CS
C1	8-28	7.5YR 5/4	7.5YR 6/4	/	CSL SAND 21 24	2M-F SBK	HA	VFI	S PS	/	GR-10 CB-15 ST-10	1VF 1F	1VF-F TV	NE	6.7	C, W
C2	28-60	7.5YR 6/4	7.5YR 7/4	/	STGL 20 22	2M-F SBK	HA	FI	SS PO	/	GR-15 CB-20 ST-20	1VF	1VF-F TV	NE	7.1	
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					

26. Partical Size Control Section	a. Depth:	b. Average Clay %:	c. Average Rock Fragment Content:	27. Depth to Lithic or Paralithic Contact:

28. Diagnostic Horizons	a. Surface:	b. Subsurface:	29. Moist Control Section Depth:
	/	/	

Previous edition ___ obsolete.

FS 2500-1 (2/86)

USDA - Forest Service

06-SP-07

SOIL DESCRIPTION

(Reference FSH 2509.18)

06-SP-07

1. Map Unit Symbol	2. Family or Series	3. Date	4. By	5. Photo. No.	6. Stop No.	7. USGS Quad	8. Location: Sec. ___ T. ___ R. ___
DA	DISTURBED	9/5/07	BL				

9. Area	10. Forest	11. Ranger District	12. State	13. County
KINNEY MINE			UTAH	CARBON

14. Parent Material	15. Bedrock Name	16. Elevation	17. Erosion: a. Kind	b. Class
COLLUVIUM	SANDSTONE		SLIGHT	

18. Landform	19. Slope: a. %	b. Shape	c. Length	d. Aspect	20. Drainage Class	21. Surface Stone and Rock: a. GR	b. CB	c. ST	d. BY
TOESLOPE / FANSLOPE	12	CONVEX			WD	5	15	5	

22. Potential Natural Vegetation	23. Annual Precipitation	24. Measured Soil Temperature	25. Water Table (Depth)
SAGE RABBITBRUSH, ARHA, PUTR			NONE

HORIZON DESIGNATION (a)	DEPTH (b)	COLOR (c) Moist (1)	COLOR (c) Dry (2)	COLOR (c) Mottling (3)	LAB TEXTURE (d)	STRUCTURE (e)	CONSISTENCE (f) Dry (1)	CONSISTENCE (f) Moist (2)	CONSISTENCE (f) Wet (3)	SPECIAL FEATURES (g) Cutans (1)	SPECIAL FEATURES (g) % of Rock Fragments (2)	SPECIAL FEATURES (g) Roots (3)	SPECIAL FEATURES (g) Pores (4)	EFFER. CLASS (h)	LAB FIELD pH (i)	BOUNDARY (j)
REC #1	0-6	10YR 3/1	10YR 4/2	/	LOAM ZC	2MGR	SO	FR	SO PO	/	GR-5 CB-3 ST-3	2VF 1F	2VF IN	NE	7.3	C, W
CUAL	6-55	CUAL FWES SAMPLES			LOAM GR	DUPLI MA	SELINIM ACID / BASE			4% POS.	GR-10 CB-5 ST-15	1VF		NE	7.4	C, S
2B	55-80	10YR 3/2	10YR 5/2	/	LOAM ~~SILT~~ LOAM ZB	3C-M SBK	HA	FI	SO PO	/	GR-5 CB-5 ST-6	/	1VF TU	NE	6.2	
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					

26. Vertical Site Control Section	a. Depth:	b. Average Clay %:	c. Average Rock Fragment Content:	27. Depth to Lithic or Paralithic Contact:

28. Diagnostic Horizons	a. Surface:	b. Subsurface:	29. Moist Control Section Depth:
	/	/	

Previous edition ___ obs.

FS 2500-1 (2/86)

USDA - For[illegible]vice

SOIL DE[illegible]IPTION

(Reference [illegible]2509.18)

07-SP-07

1. Map Unit Symbol	2. Family or Series	3. Date	4. By	5. Photo. No.	6. Stop No.	7. USGS Quad	8. Location: Sec. ___ T. ___ R. ___
2A	LO-SM TYPIC ARGIUSTOLL / LITHIC	9/5/07	BC				

9. Area	10. Forest	11. Ranger District	12. State	13. County
KINNEY MINE			UTAH	CARBON

14. Parent Material	15. Bedrock Name	16. Elevation	17. Erosion: a. Kind	b. Class
COLLUVIUM	SANDSTONE		NONE	

18. Landform	19. Slope: a. %	b. Shape	c. Length	d. Aspect	20. Drainage Class	21. Surface Stone and Rock: a. GR	b. CB	c. ST	d. BY
FANSCAPE	8	PLANAR	50'	270°	WD	5	5	TR	0

22. Potential Natural Vegetation	23. Annual Precipitation	24. Measured Soil Temperature	25. Water Table (Depth)
SAGEBRUSH - GRASSES W/ LUPINE & PAINTBRUSH			

HORIZON DESIGNATION (a)	INCH DEPTH (b)	COLOR (c) Moist (1)	COLOR (c) Dry (2)	COLOR (c) Mottling (3)	TEXTURE (d)	%C	STRUCTURE (e)	CONSISTENCE (f) Dry (1)	CONSISTENCE (f) Moist (2)	CONSISTENCE (f) Wet (3)	SPECIAL FEATURES (g) Cutans (1)	% of Rock Fragments (2)	SPECIAL FEATURES (g) Roots (3)	SPECIAL FEATURES (g) Pores (4)	EFFER. CLASS (h)	LAB FIELD pH (i)	BOUNDARY (j)
A1	0-6	10YR 3/1	10YR 4/2	/	SL	15 / 16	2M GR	SO	VFR	SO PO	/	GR-5 CB-5 ST-0	3VF 2F 1C	3VF IN	NE	6.6	C,S
A2	6-11	10YR 3/3	10YR 5/3	/	SL (VGRV LOM)	16 / 19	2F SBK → FGR	SO	VFR	SO PO	/	GR-15 CB-15 ST-5	2VF 2F 1C	2VF IN 1F 1M	NE	6.5	C,W
Bw	11-28	10YR 4/3	10YR 6/3	/	SL	16 / 16	MASSIVE	HA	VFI	SO PO	/	GR-15 CB-20 ST-20+	1M 1VF 1F BY	3VF IN	NE	6.6	G,W
Bt	28-40	7.5YR 5/4	7.5YR 6/4	/	SCL	18 / 25	MASSIVE	VH	VFI	SO PO	/	GR-20 CB-25 ST-25+	/ BY	2VF TU 2VF IN	NE	7.1	
												GR- CB- ST-					
												GR- CB- ST-					
												GR- CB- ST-					
												GR- CB- ST-					
												GR- CB- ST-					

26. Particl Size Control Section	a. Depth:	b. Average Clay %:	c. Average Rock Fragment Content:	27. Depth to Lithic or Paralithic Contact:
	10-40"	17	>50%	>60" EST.

28. Diagnostic Horizons	a. Surface:	b. Subsurface:	29. Moist Control Section Depth:
	MOLLIC	CAMBIC	10-40"

Previous edition [illegible]lete.

FS-2500-1 (2/86)

USDA - Forest Service

SOIL DESCRIPTION

(Reference FSH 2509.18)

08-SP-07

1. Map Unit Symbol	2. Family or Series	3. Date	4. By	5. Photo. No.	6. Stop No.	7. USGS Quad	8. Location:
2A	FINE-LOAMY TYPIC ~~ARGIXEROLL~~ HAPLOXEROLL	9-5-07	BC				Sec. ____ T. ____ R. ____

9. Area	10. Forest	11. Ranger District	12. State	13. County
KINNEY MINE			UTAH	CARBON

14. Parent Material	15. Bedrock Name	16. Elevation	17. Erosion: a. Kind	b. Class
COLLUVIUM	SANDSTONE		NONE	

18. Landform	19. Slope: a. %	b. Shape	c. Length	d. Aspect	20. Drainage Class	21. Surface Stone and Rock a. GR	b. CB	c. ST	d. BY
FANSCAPE	10	CONCAVE	200'	290	WD	2	2	3	0

22. Potential Natural Vegetation	23. Annual Precipitation	24. Measured Soil Temperature	25. Water Table *(Depth)*
ART. W/ RABBITBRUSH, GRASSES			NONE

HORIZON DESIGNATION (a)	DEPTH (b)	COLOR (c) Moist (1)	COLOR (c) Dry (2)	COLOR (c) Mottling (3)	LAB TEXTURE (d)	STRUCTURE (e)	CONSISTENCE (f) Dry (1)	CONSISTENCE (f) Moist (2)	CONSISTENCE (f) Wet (3)	SPECIAL FEATURES (g) Cutans (1)	SPECIAL FEATURES (g) % of Rock Fragments (2)	SPECIAL FEATURES (g) Roots (3)	SPECIAL FEATURES (g) Pores (4)	EFFER. CLASS (h)	LAB FIELD pH (i)	BOUNDARY (j)
A	0-9	10YR 3/3	10YR 5/3		SL 17 14	2M-F GR	SO	VFR	SO PO		GR-Tr CB-2 ST-0	3VF 2F	3VF-M	NE	6.5	C,S
BW	9-17	10YR 4/4	10YR 6/3		SL 19 16	1M SBK → M GR	HA	FI	SO PO		GR-3 CB-2 ST-0	2VF 1F	1VF,M 2F TU	NE	6.6	C,S
Bt1	17-36	7.5YR 5/4	7.5YR 6/4	GR	GR LSAM 17 21	2M-SBK	SH	FR	SO PO		GR-10 CB-5 ST-0	1VF	1VF-F TU	NE	6.6	G,W
Bt2	36-60	7.5YR 4/4	7.5YR 6/4		SCV SL 15	3M-C SBK	SH	FR	SO PO		GR-15 CB-10 ST-10	1VF	1VF-F TU	NE	6.7	
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					

26. Partical Size Control Section	a. Depth:	b. Average Clay %:	c. Average Rock Fragment Content:	27. Depth to Lithic or Paralithic Contact:
	10-40"	18%	15%	>60"

28. Diagnostic Horizons	a. Surface:	b. Subsurface:	29. Moist Control Section Depth:
	MOLLIC	CAMBIC	10-40"

Previous editions obsolete.

FS 2500-1 (3/06)

USDA - Forest Service

SOIL DESCRIPTION

(Reference FSH 2509.18)

ARGIUSTOLL

NOT DISTURBED

09-SP-07

1. Map Unit Symbol	2. Family or Series	3. Date	4. By	5. Photo. No.	6. Stop No.	7. USGS Quad	8. Location:
2A	FINE-LOAMY TYPIC HAPLUSTALF	9-6-07	BC				Sec. ____ T. ____ R. ____

9. Area	10. Forest	11. Ranger District	12. State	13. County
CLINEY				CARBON

14. Parent Material	15. Bedrock Name	16. Elevation	17. Erosion: a. Kind	b. Class
COLLUVIUM			NONE	

18. Landform	19. Slope: a. %	b. Shape	c. Length	d. Aspect	20. Drainage Class	21. Surface Stone and Rock a. GR	b. CB	c. ST	d. BY
TOESLOPE	7	CONVEX	200	310°	WP	1	3	5	0

22. Potential Natural Vegetation	23. Annual Precipitation	24. Measured Soil Temperature	25. Water Table (Depth)
APPALACHIAN GRASSES			None

HORIZON DESIGNATION (a)	DEPTH (b)	COLOR (c) Moist (1)	Dry (2)	Mottling (3)	LAB TEXTURE (d)	STRUCTURE (e)	CONSISTENCE (f) Dry (1)	Moist (2)	Wet (3)	SPECIAL FEATURES (g) Cutans (1)	% of Rock Fragments (2)	Roots (3)	Pores (4)	EFFER. CLASS (h)	LAB FIELD pH (i)	BOUNDARY (j)
A	0-6	10YR 2/2	10YR 5/3	/	SL 14	1F-M GR	LO	LO	SO PO	/	GR-10 CB-0 ST-10	3VF 2F	3VF IN	NE	6.5	C,S
Bw	6-12	10YR 4/4	10YR 6/3	/	SLOAM 19 16	2M-C SBK	SH	FR	SO PO	/	GR-5 CB-0 ST-10	2VF 1F	1VF IN 2F TU	NE	6.5	C,W
Bt1	12-30	7.5YR 4/4	7.5YR 6/4	/	CS LOAM 21 22	3M SBK	SH	FI	SS PO	/	GR-10 CB-10 ST-/	1VF	1F,VF TU	NE	6.5	G,W
Bt2	30-60	7.5YR 5/4	7.5YR 6/4	/	LOAM 14 25	3M SBK	VH	VFI	SS FS		GR-5 CB-0 ST-0	1VF	1VF-F TU	NE	6.9	
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					

26. Partical Size Control Section	a. Depth:	b. Average Clay %:	c. Average Rock Fragment Content:	27. Depth to Lithic or Paralithic Contact:
	6-26"	20	< 5%	>60"

28. Diagnostic Horizons	a. Surface:	b. Subsurface:	29. Moist Control Section Depth:
	OCHRIC → MOLLIC	ARGILLIC	10-40"

Previous edition ____ Obs. INTERGRADE

FS 2500-1 (2/86)

Map Unit 1-A was later determined to be D-A

ARGICRYOLL

DISTURBANCE ON SFC ONLY

SOIL DESCRIPTION

(Reference FSH 2509.18)

10-SP-07

1. Map Unit Symbol	2. Family or Series	3. Date	4. By	5. Photo. No.	6. Stop No.	7. USGS Quad	8. Location: Sec. ___ T. ___ R. ___
1A	LO-SM, MIXED, TYPIC ARGIXEROLL	9-5-07	BC				

9. Area	10. Forest	11. Ranger District	12. State	13. County
KINNEY #2			UT	CARBON

14. Parent Material	15. Bedrock Name	16. Elevation	17. Erosion: a. Kind	b. Class
COLLUVIUM	SANDSTONE		SLIGHT	

18. Landform	19. Slope: a. %	b. Shape	c. Length	d. Aspect	20. Drainage Class	21. Surface Stone and Rock: a. GR	b. CB	c. ST	d. BY
SIDESLOPE	32	CONVEX	25'	316	WD	5	5	3	0

22. Potential Natural Vegetation	23. Annual Precipitation	24. Measured Soil Temperature	25. Water Table *(Depth)*
ASPEN - SNOWBERRY			NONE

HORIZON DESIGNATION (a)	DEPTH (INCHES) (b)	COLOR (c) Moist (1)	COLOR (c) Dry (2)	COLOR (c) Mottling (3)	LAB TEXTURE (d)	STRUCTURE (e)	CONSISTENCE (f) Dry (1)	CONSISTENCE (f) Moist (2)	CONSISTENCE (f) Wet (3)	SPECIAL FEATURES (g) Cutans (1)	SPECIAL FEATURES (g) % of Rock Fragments (2)	SPECIAL FEATURES (g) Roots (3)	SPECIAL FEATURES (g) Pores (4)	EFFER. CLASS (h)	LAB FIELD pH (i)	BOUNDARY (j)
A	0-7	10YR 3/2	10YR 5/2		ST SL 11 15	1M-F SBK	SH	FR	SO PO		GR-10 CB-5 ST-10	1VF-F 2M2C	3VF IN	NE	6.9	C,W
Bt1	7-17	7.5YR 6/4	7.5YR 6/4		CB GL LOM 19 28	2M-F SBK	VH	VFI	S/P	1MPF 1MPO	GR-5 CB-15 ST-5	1VF-F 2M2C	3VFIN 2FTU	NE	6.6	C S
Bt2	17-40	7.5YR 5/4	7.5YR 6/2		ST V LOM SCT 24	3M-C ABK	HA	VFI	S/P	2M4PF 1MPO	GR-10 CB-10 ST-15	1M 1C	1VFTU 1FIN	NE	6.7	G,W
Bt3	40-70	7.5YR 5/4	10YR 6/4		STX LOM 18 26	3M-C SBK	VH	VFI	SS/PS	2MPPO	GR-10 CB-15 ST-30	1VF	2VFIN 1FTU	NE	7.3	
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					

26. Partical Size Control Section	a. Depth:	b. Average Clay %:	c. Average Rock Fragment Content:	27. Depth to Lithic or Paralithic Contact:
	T 27'	20%	30%	>60"

28. Diagnostic Horizons	a. Surface:	b. Subsurface:	29. Moist Control Section Depth:
	MOLLIC	ARGILLIC	10-40"

Previous edition ___ Obs.

FS-2500-1 (2/86)

SOIL DESCRIPTION

ARGIUSTOLL (Reference FSH 2509.18) 11-SP-07

1. Map Unit Symbol	2. Family or Series	3. Date	4. By	5. Photo. No.	6. Stop No.	7. USGS Quad	8. Location: Sec. ___ T. ___ R. ___
2B	LO-SUBETAL TYP HAPLOSTOLL	9-6-07	BK				

9. Area	10. Forest	11. Ranger District	12. State	13. County
KINNEY MINE			UTAH	CARBON

14. Parent Material	15. Bedrock Name	16. Elevation	17. Erosion: a. Kind	b. Class
COLLUVIUM	SANDSTONE		NONE	

18. Landform	19. Slope: a. %	b. Shape	c. Length	d. Aspect	20. Drainage Class	21. Surface Stone and Rock: a. GR	b. CB	c. ST	d. BY
TOESLOPE / LANDSLIDE DEPOSIT	32	CONVEX	50'	290°	WD				

22. Potential Natural Vegetation	23. Annual Precipitation	24. Measured Soil Temperature	25. Water Table (Depth)
BIG SAGEBRUSH, GRASSES, RABBITBRUSH			NONE

HORIZON DESIGNATION (a)	DEPTH (b)	COLOR (c) Moist (1)	COLOR (c) Dry (2)	COLOR (c) Mottling (3)	LAB TEXTURE (d)	STRUCTURE (e)	CONSISTENCE (f) Dry (1)	CONSISTENCE (f) Moist (2)	CONSISTENCE (f) Wet (3)	SPECIAL FEATURES (g) Cutans (1)	SPECIAL FEATURES (g) % of Rock Fragments (2)	SPECIAL FEATURES (g) Roots (3)	SPECIAL FEATURES (g) Pores (4)	EFFER. CLASS (h)	LAB pH (i)	BOUNDARY (j)
A	0-5	10YR 3/2	10YR 5/3	/	CB SL 16	2M-F GR	SD	VFR	SO PO	/	GR-10 CB-10 ST-0	2VF 1F 1M	3VF-M	NE	6.8	C,S
AB	5-13	10YR 4/3	10YR 6/3	/	ST BLCAM 20 17	2F SBK	SH	FI	SS PO	/	GR-15 CB-5 ST-15	1VF 1F 1M	2VF-M 1F-TU	NE	6.4	C,S
BW	13-33	10YR 5/4	10YR 6/2	/	GRV SL 17 14	SG	LO	LO	SO PO	/	GR-15 CB-10 ST-10	1VF 1F	2VF-M	NE	6.6	C,W
Bt	33-55	7.5YR 5/4	7.5YR 6/4	/	GRV LCOSL 24 21	2F-M SBK	SH	FR	SO PO	/	GR-25 CB-10 ST-5	1VF 1F	2F-TU	NE	6.8	G,W
C2	55-80+	7.5YR 5/4	7.5YR 6/4	/	GR ESAM 26	3M-F SBK	LO	FI	SS PS	/	GR-10 CB-5 ST-0	/	1F-VF TU	NE	7.1	
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					

26. Particle Size Control Section	a. Depth:	b. Average Clay %:	c. Average Rock Fragment Content:	27. Depth to Lithic or Paralithic Contact:
	10-40"	22	37%	>80"

28. Diagnostic Horizons	a. Surface:	b. Subsurface:	29. Moist Control Section Depth:
	MOLLIC	ARGILLIC ?	10-40"

Previous editions obsolete.

FS-2500-1 (2/86)

USDA - Forest Service

SOIL DESCRIPTION

(Reference FSH 2509.18)

INCLUSION

12-SP-07

1. Map Unit Symbol	2. Family or Series	3. Date	4. By	5. Photo. No.	6. Stop No.	7. USGS Quad	8. Location: Sec. ____ T. ____ R. ____
DA2A	CO-LOAMY TYPIC HAPLUSTOLL	9-6-07	BC		07-12		

9. Area	10. Forest	11. Ranger District	12. State	13. County
KINNEY MINE			UT	CARBON

14. Parent Material	15. Bedrock Name	16. Elevation	17. Erosion: a. Kind	b. Class
COLLUVIUM	SANDSTONE		NONE	

18. Landform	19. Slope: a. %	b. Shape	c. Length	d. Aspect	20. Drainage Class	21. Surface Stone and Rock: a. GR	b. CB	c. ST	d. BY
SIDESLOPE	23	CONVEX	30'	290	WD	5	3	2	

22. Potential Natural Vegetation	23. Annual Precipitation	24. Measured Soil Temperature	25. Water Table (Depth)
RABBITBRUSH			NONE

HORIZON DESIGNATION (a)	INCH DEPTH (b)	COLOR (c) Moist (1)	COLOR (c) Dry (2)	COLOR (c) Mottling (3)	LAB TEXTURE (d) %	STRUCTURE (e)	CONSISTENCE (f) Dry (1)	CONSISTENCE (f) Moist (2)	CONSISTENCE (f) Wet (3)	SPECIAL FEATURES (g) Cutans (1)	SPECIAL FEATURES (g) % of Rock Fragments (2)	SPECIAL FEATURES (g) Roots (3)	SPECIAL FEATURES (g) Pores (4)	EFFER. CLASS (h)	LAB pH (i)	BOUNDARY (j)
A1	0-6	10YR 3/3	10YR 5/3	/	S LOAM 16 21	2M GR	SO	VFR	SS PO	/	GR-3 CB-2 ST-0	3VF 2F	3VFIN	NE	7.1	C,S
A2	6-12	10YR 4/3	10YR 5/2	/	S LOAM 16 23	3M-C SBK	HA	FI	SS PS	/	GR-3 CB-2 ST-0	1VF 1F	1VF IN 2F TU	NE	7.2	G,W
B1	12-24	10YR 4/3	10YR 5/2	/	S LOAM 15 25	3M-C SBK	HA	FI	SS PS	/	GR-4 CB-2 ST-0	1VF	1VFIN 2FTU	NE	7.2	G,W
B2	24-36	10YR 4/4	10YR 5/2	/	COSL 15 24	MASS IVE	VH	VFI	SS PS	/	GR-10 CB-15 ST-0	1VF	1F TU	NE	7.4	C,S
C1	36-52	10YR 4/4	10YR 5/2	/	S LOAM 14 26	MASS IVE	EH	VFI	SO PO	/	GR-3 CB-2 ST-0	/	1VF-F TU	NE	7.4	C,S
C2	52-75	10YR 5/4	10YR 6/3	/	S LOAM 15 23	MASS IVE	EH	VFI	SO PS	/	GR-2 CB-2 ST-0	/	1VF-F TU		7.8	
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					

26. Partical Size Control Section	a. Depth:	b. Average Clay %:	c. Average Rock Fragment Content:	27. Depth to Lithic or Paralithic Contact:
	10-40"	14	<10%	>80"

28. Diagnostic Horizons	a. Surface:	b. Subsurface:	29. Moist Control Section Depth:
	NOLLIC	CAMBIC	10-40"

Previous edition ____ is ____.

FS 2500-8 (12/86)

TRENCH PIT -13 FT.

USDA - Forest Service

SOIL DESCRIPTION

(Reference FSH 2509.18)

10 MDS-3

13-SP-OT

1. Map Unit Symbol	2. Family or Series	3. Date	4. By	5. Photo. No.	6. Stop No.	7. USGS Quad	8. Location: Sec. ___ T. ___ R. ___
DA	DISTURBED	9-7-07	RC				

9. Area	10. Forest	11. Ranger District	12. State	13. County
KINNEY #2			UTAH	CARBON

14. Parent Material	15. Bedrock Name	16. Elevation	17. Erosion: a. Kind	b. Class
COLLUVIUM	SS		NONE	

18. Landform	19. Slope: a. %	b. Shape	c. Length	d. Aspect	20. Drainage Class	21. Surface Stone and Rock: a. GR	b. CB	c. ST	d. BY
FANSLOPE	12				WD	2	3	3	

22. Potential Natural Vegetation	23. Annual Precipitation	24. Measured Soil Temperature	25. Water Table (Depth)
CWA - SAGEBRUSH			

HORIZON DESIGNATION (a)	DEPTH (b)	COLOR (c) Moist (1)	COLOR (c) Dry (2)	COLOR (c) Mottling (3)	TEXTURE (d)	STRUCTURE (e)	CONSISTENCE (f) Dry (1)	CONSISTENCE (f) Moist (2)	CONSISTENCE (f) Wet (3)	SPECIAL FEATURES (g) Cutans (1)	SPECIAL FEATURES (g) % of Rock Fragments (2)	SPECIAL FEATURES (g) Roots (3)	SPECIAL FEATURES (g) Pores (4)	EFFER. CLASS (h)	LAB FIELD pH (i)	BOUNDARY (j)
D	0-8	10YR 4/3	10YR 5/4	/	SL 16 14	2m-F GR	SO	FR	SO PO	/	GR-0 CB-0 ST-0	3VF 1F	3VFIN	NE	7.0	CS
COAL	8-25	COAL	REFUSE		SAND 16	SG	LO	LO	SO PO	/	GR-0 CB-0 ST-0	1VF	2FIN	NE	6.2	C,S
B$_t$	25-42	10YR 4/3	10YR 5/3	/	SCBL LOAM 18 21	2C SBK	HA	FI	SO PO	/	GR-0 CB-0 ST-0	1VF		NE	6.8	CW
BC$_t$	42-70	7.5YR 5/4	7.5YR 6/4	/	GRX SL 43 13 6	2F-M SBK	LO	LO	SO PO	/	GR-60 CB-5 ST-0			NE	6.6	
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					
											GR- CB- ST-					

26. Partical Size Control Section	a. Depth:	b. Average Clay %:	c. Average Rock Fragment Content:	27. Depth to Lithic or Paralithic Contact:

28. Diagnostic Horizons	a. Surface:	b. Subsurface:	29. Moist Control Section Depth:

Previous edition ___ obsolete.

FS 2500-1 (2/86)

APPENDIX 4: Soil Pit Profile Photos

APPENDIX 4: Soil Pit Profile Photos

Appendix 4. Soil Profile Photographs For
36 Laboratory Tested Sample Sites

KINNEY 06, Soil Pit 1A-1

6" 2VF 2+1M

17" 2M2C 1VF

28" NF1FLY

60" 1VF

KINNEY 06, Soil Pit 1A-2

15-20

25-40

40-60

60-75

75-90

KINNEY 06, Soil Pit 1B-1

0-7 3VF

7-15 2FM1C

15-28 1VR1F

28-60 1F1M

60+ 1VF

KINNEY 06, Soil Pit 2A-1

0-10 A

10-24 AB

24-44 B+

44-65 B+/C

65-80+ C

KINNEY 06, Soil Pit 2A-2

0-5 A1

5-14 A2

14-25 BN

25-38 B/C

38-60+ C2

KINNEY 06, Soil Pit 2A-3

0-9 A

9-19 B+

19-36 B+2

36-52 C1

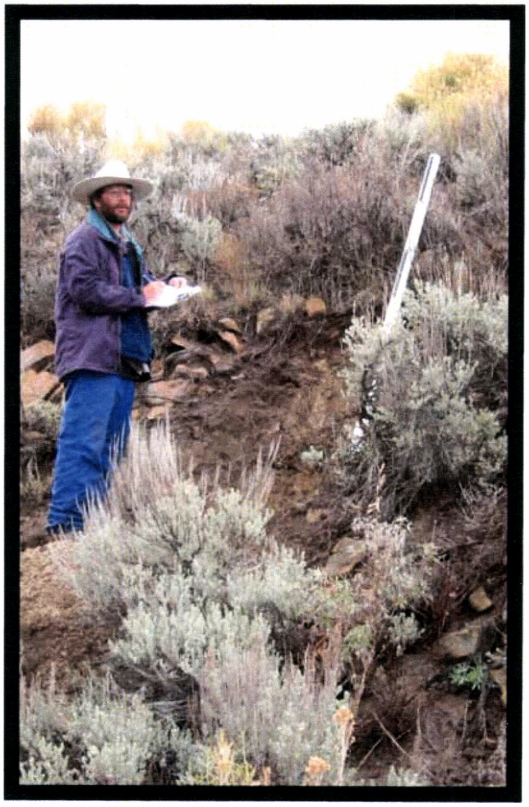
52-75 C2

KINNEY 06, Soil Pit 2A-5

0-6 A

6-12 D

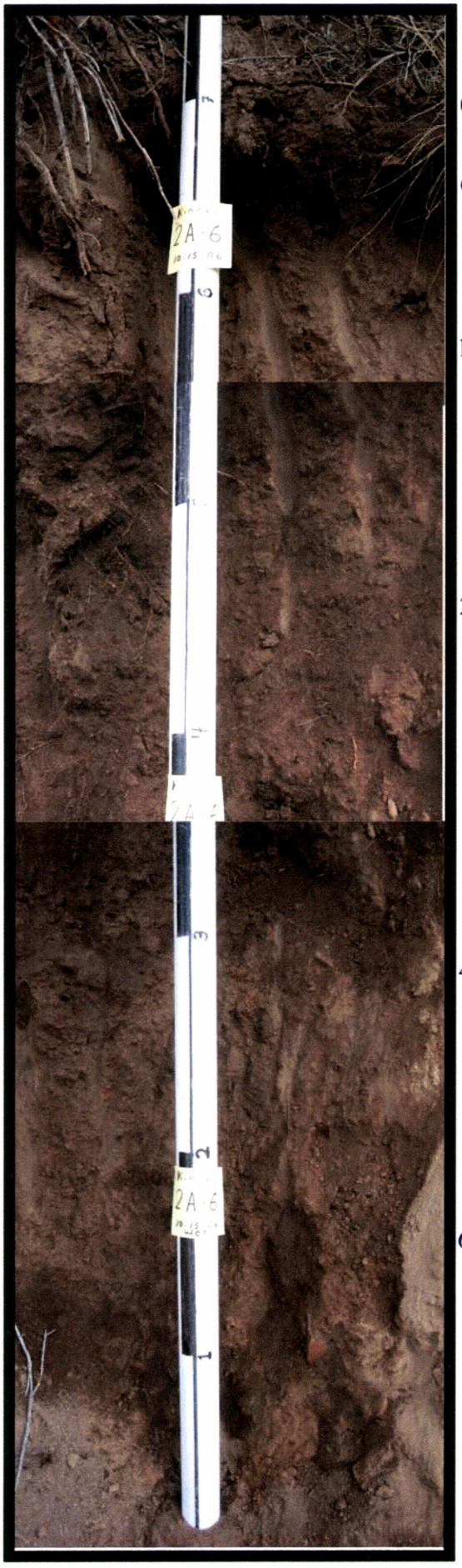
12-24 B+



24-48 B+

48-65+ BC

KINNEY 06, Soil Pit 2A-6



0-6 A1

6-12 A2

12-21 BW1

21-40 BW2

40-66 C

66-85+ C

KINNEY 06, Soil Pit 2A-7

0-7 A

7-20 B+

20-38 C

KINNEY 06, Soil Pit 2B-1

0-9 A

9-19 B+

19-33 B+

33-51 BC

51-80 Cr

80+ R

KINNEY 06, Soil Pit D-1

0-6 BUR

6-16 BUR

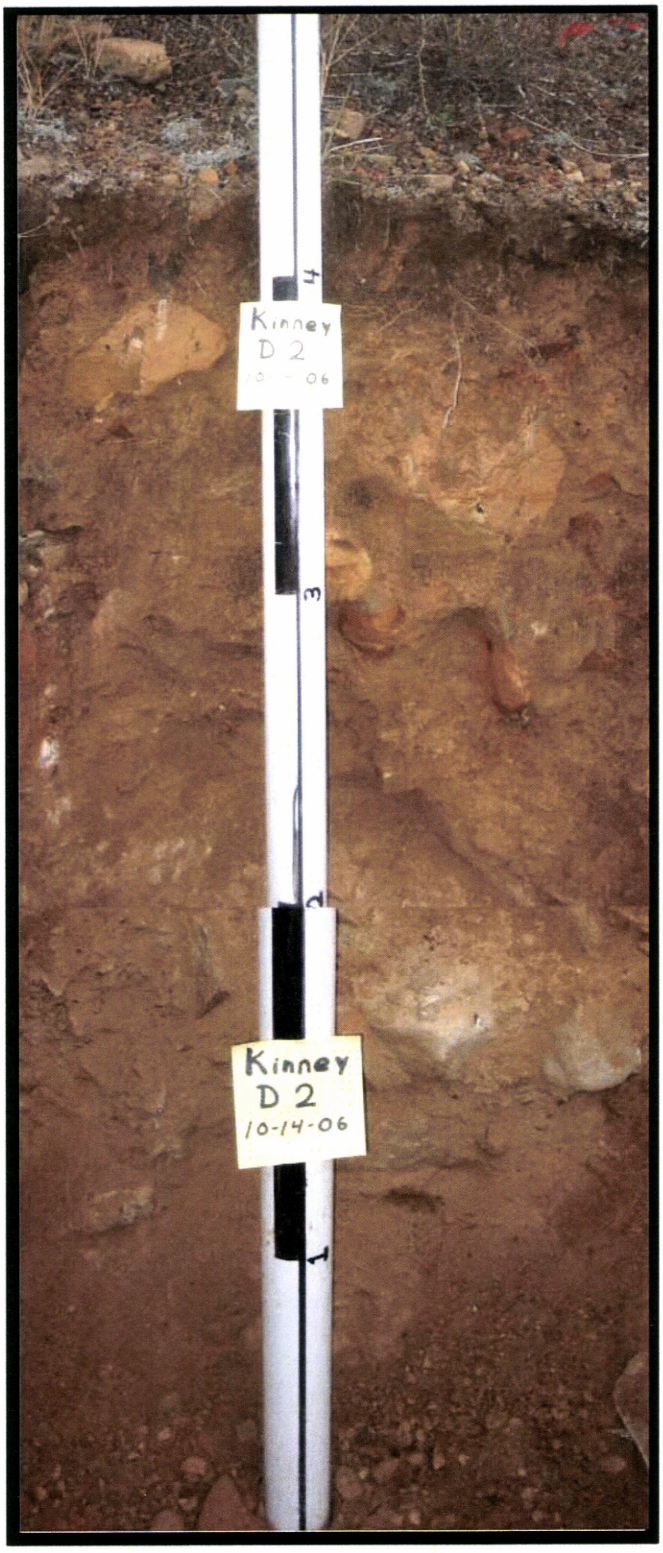
16-25 A/B

25-40 C1

40-65 C2

65-95+ C3

KINNEY 06, Soil Pit D-2



0-6 BUR

6-24 BUR

24-45+ C

KINNEY 06, Soil Pit D-3

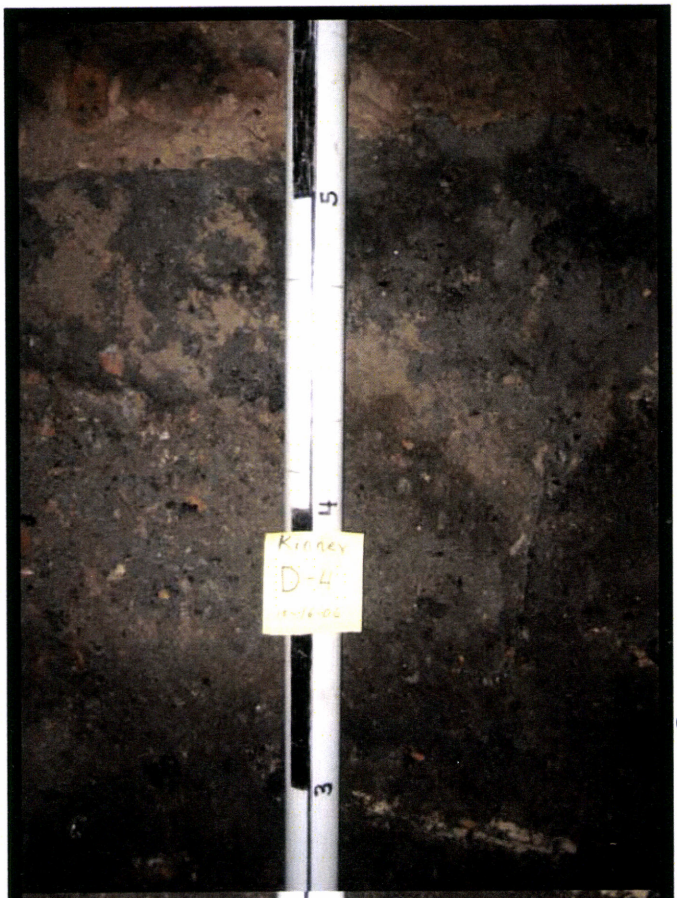
0-10 A out

10-20
B+ Dist

40-60 C1

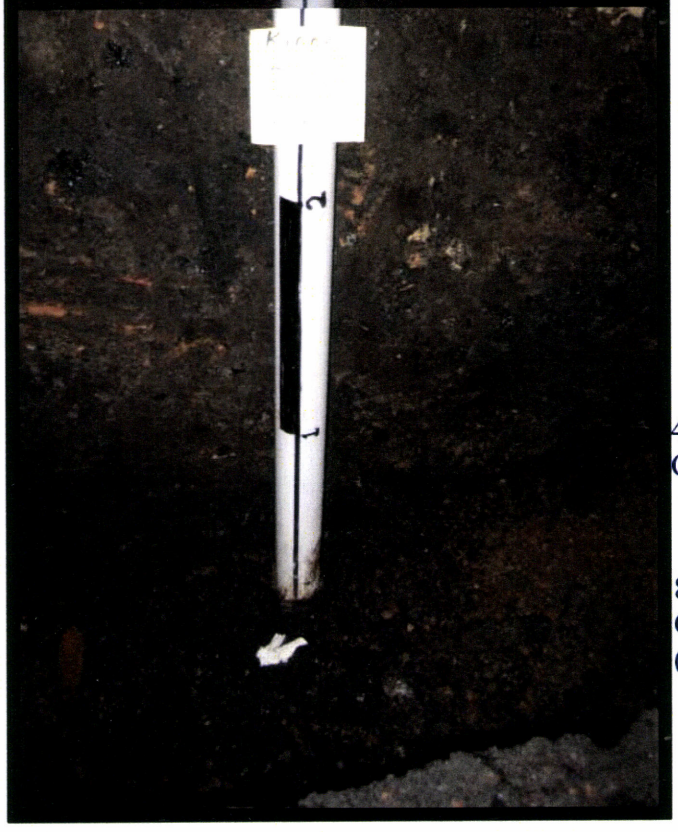
60-75+ C2

KINNEY 06, Soil Pit D-4



0-8 Disturbed
8-16 Subsoil

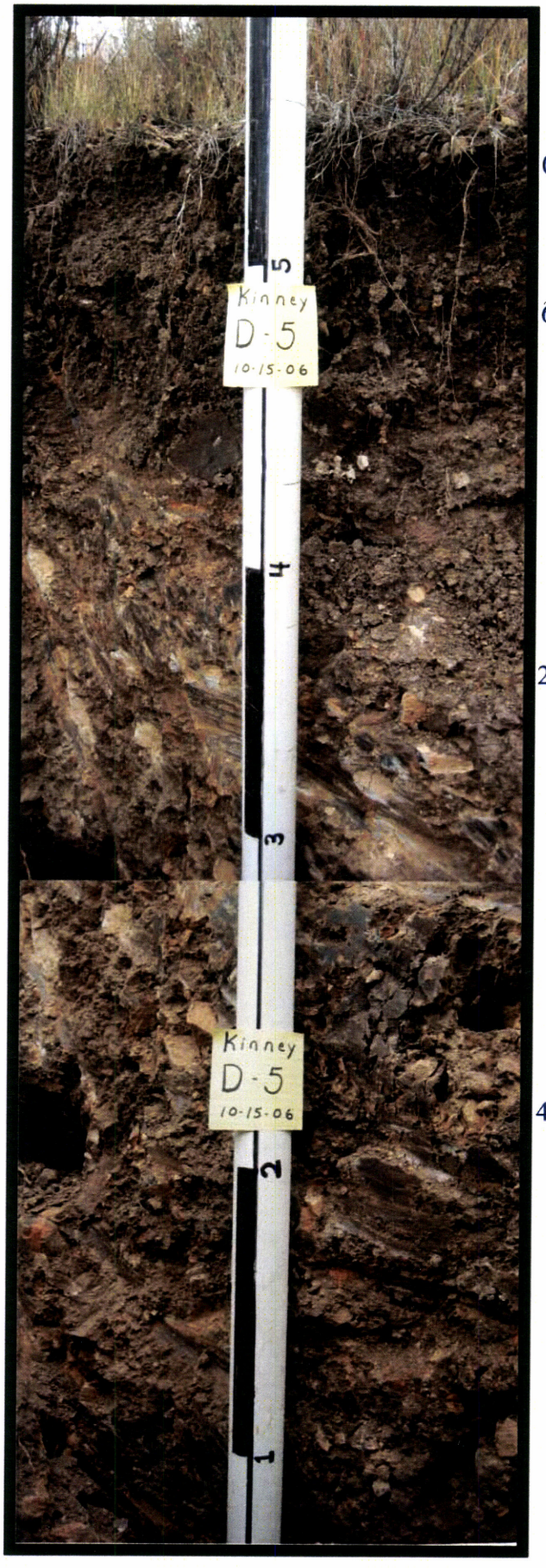
12-47
Coal waste



47-85
Coal waste

85-144
Coal waste
(moist)

KINNEY 06, Soil Pit D-5



0-6 D1

6-20 D2

20-40 D3

40-68+ D4

KINNEY 06, Soil Pit D-6

0-6 A

6-24 2C clumped coal

24-48 2C 2

48-72 2C 3

KINNEY 06, Soil Pit D-7

0-6 D1

6-20 D2

20-42 D3

42-58 D4

58-75+ B6

KINNEY 06, Soil Pit D-8

0-6 A

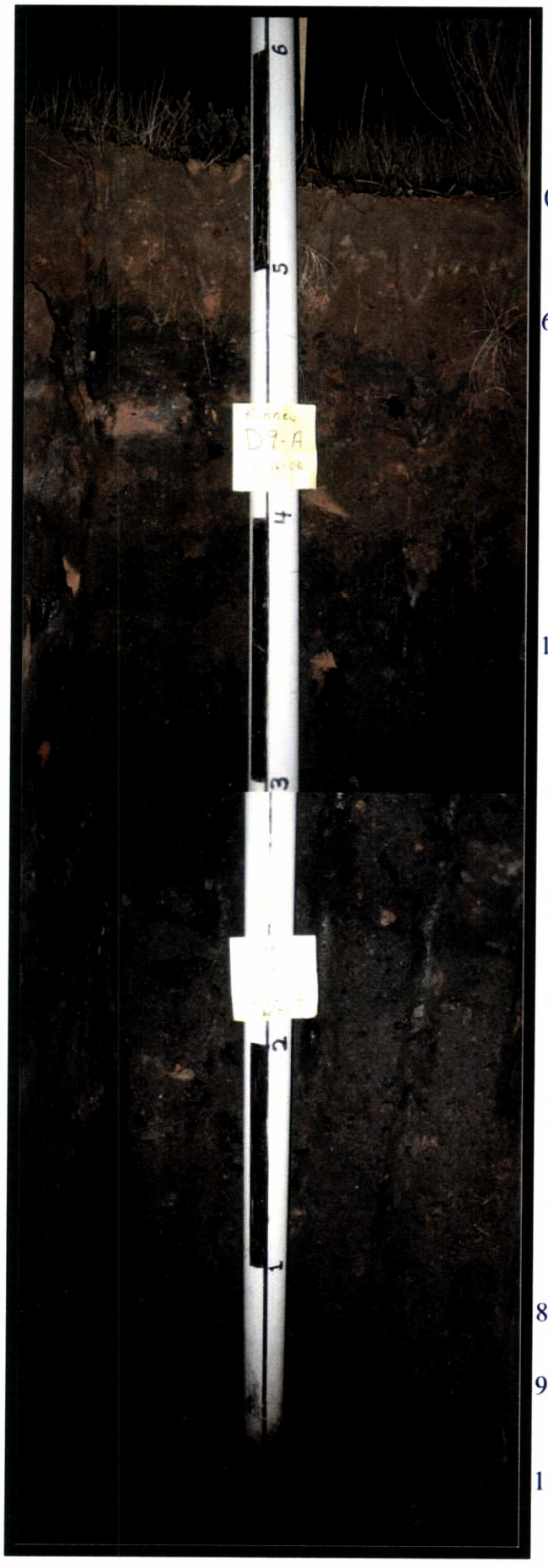
6-13 BA

13-26 B+

26-48 B+2

48-78+ C

KINNEY 06, Soil Pit D9-A



0-6 Disturbed

6-15 Dist. 2

15-80 Coal

80-95 Ab

95-115+ B+b

115-140 B+Cb

KINNEY 06, Soil Pit D9-B

0-11 Mixed Subsoil
over waste material

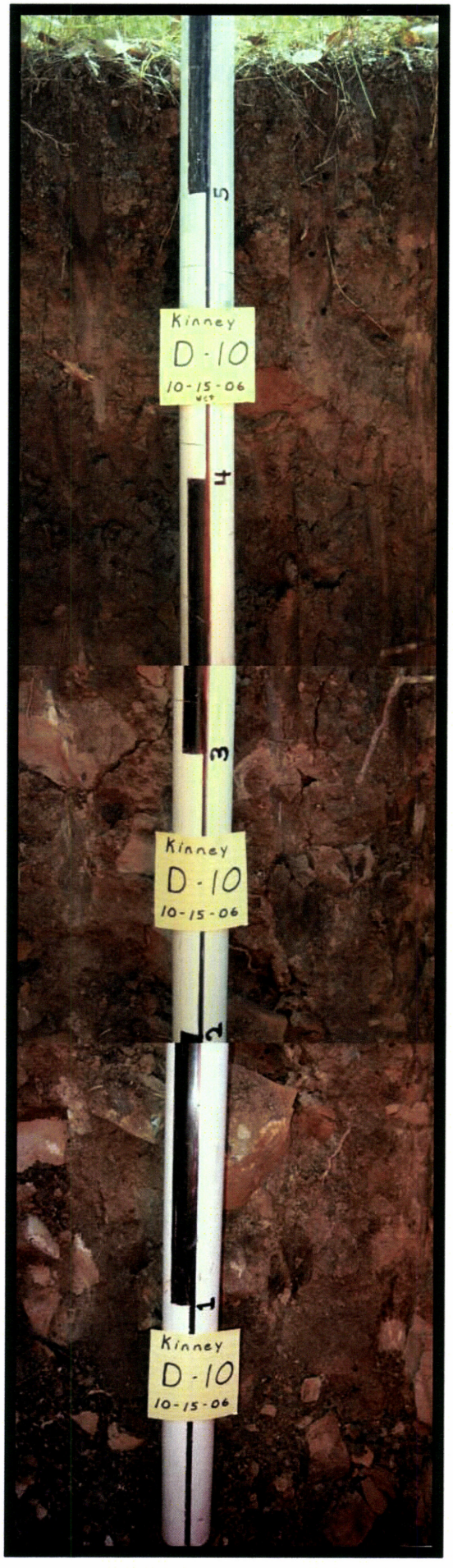
11-29 Coal 50- 70%
fines w/ Subsoil

29-52 Coal 95%
NA w/ Subsoil

52-80 Bb

80-95 Bb

KINNEY 06, Soil Pit D-10



0-5 A

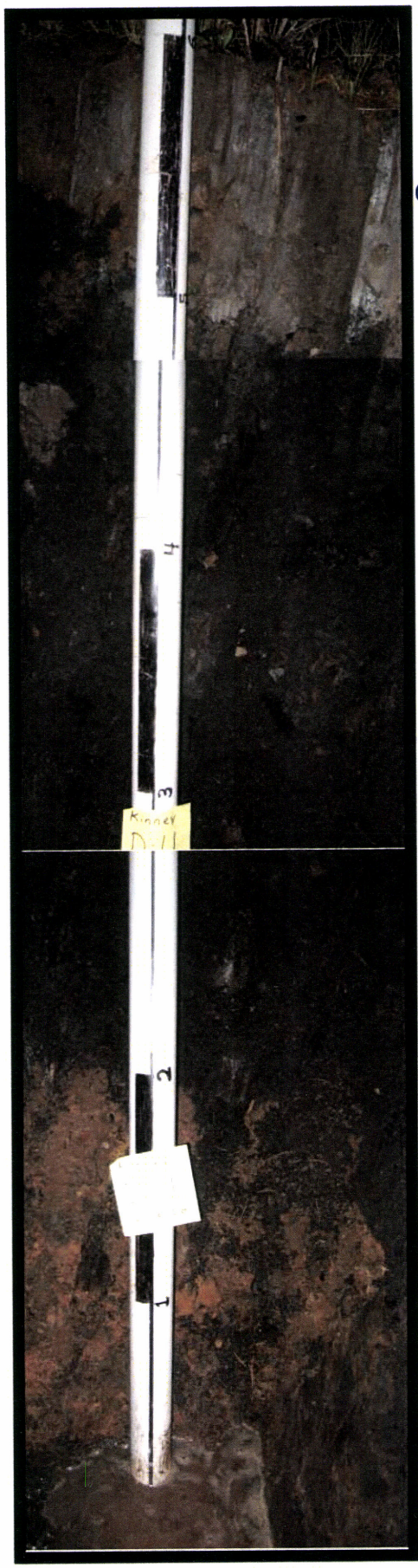
5-11 B+1

11-23 B+2

23-45 B+3

45-65 C

KINNEY 06, Soil Pit D-11



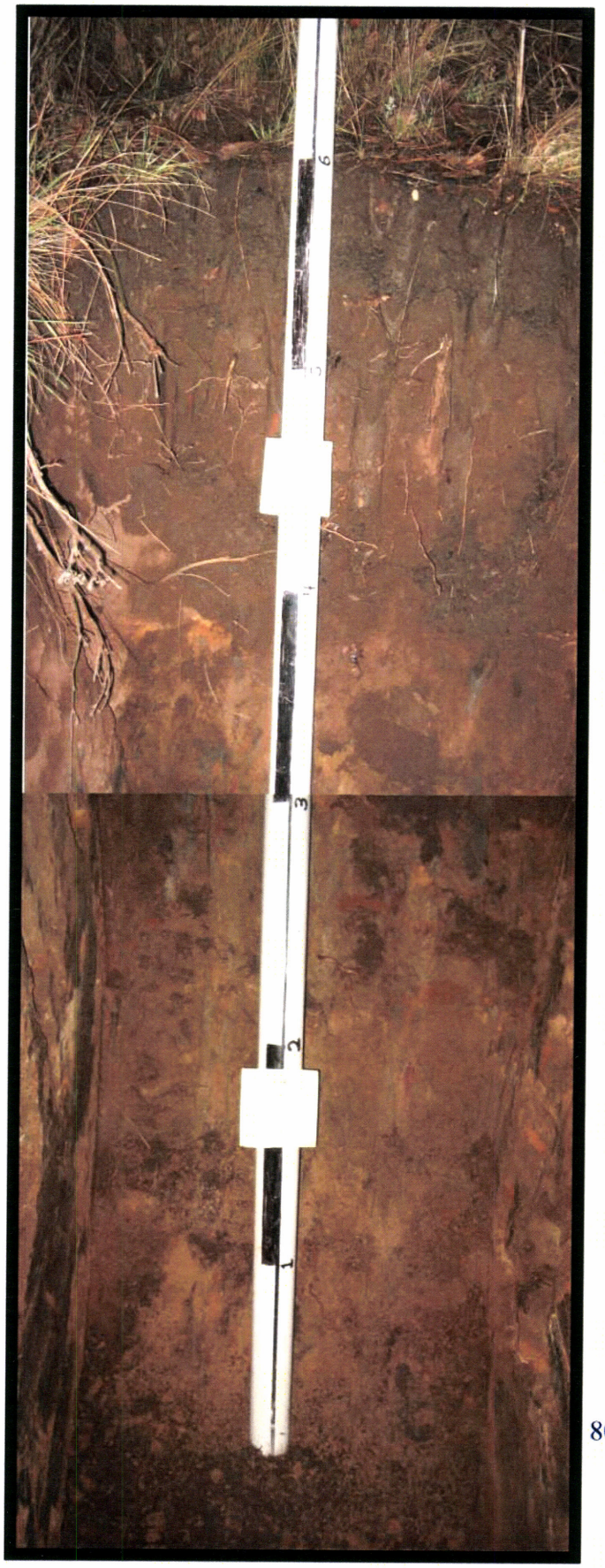
0-12 Subsoil reclaimed

12-62 w/ some
Subsoil mixed

62-80 C
Native soil

80-90+

KINNEY 06, Soil Pit D-12



0-6

9-19 B+

19-33 B+

33-51 BC

51-80 Cr

80+ R

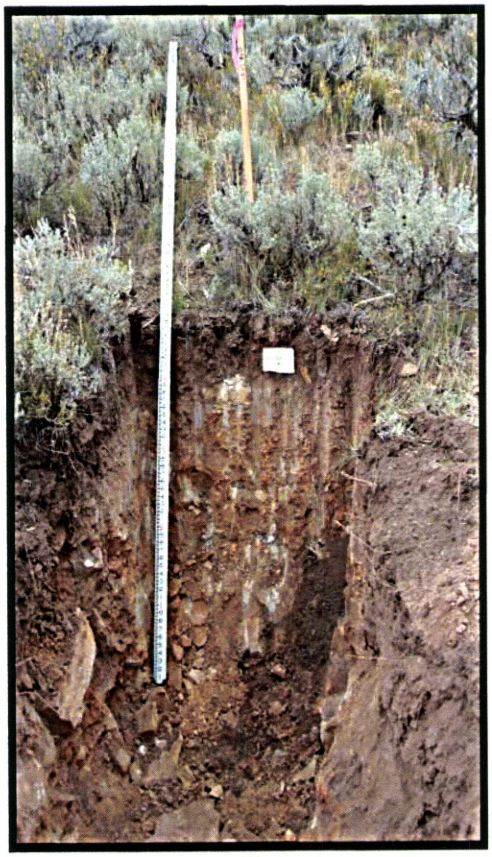
2-07
Kinney Soil Pit

Hand Auger Hole. See Pedon discription for horizons.

3-07
Kinney Soil Pit

Auger Hole in bottom of visable pit. See Pedon discription for horizons.

4-07
Kinney Soil Pit

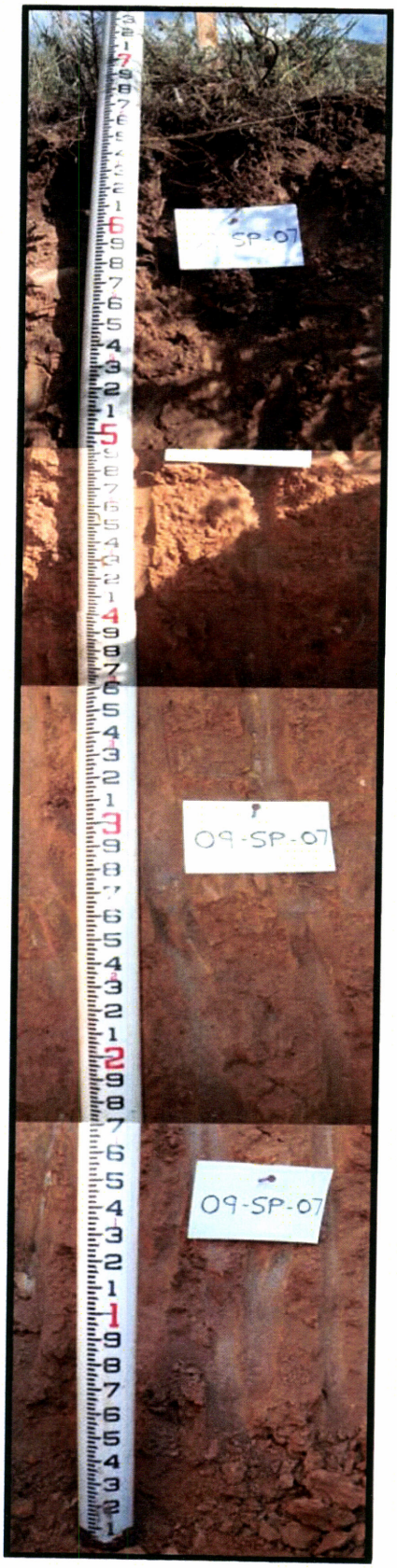


5-07
Kinney Soil Pit

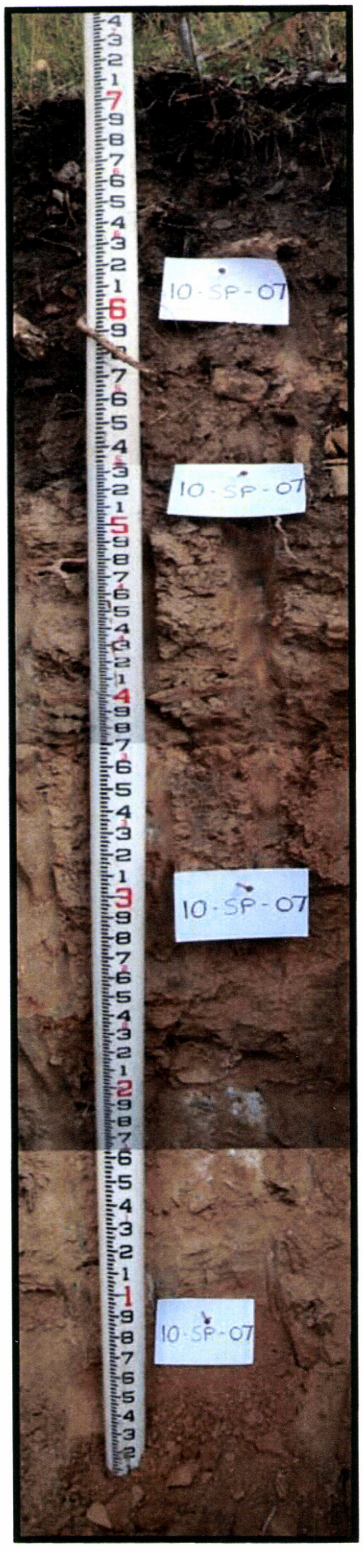
6-07
Kinney Soil Pit

7-07
Kinney Soil Pit

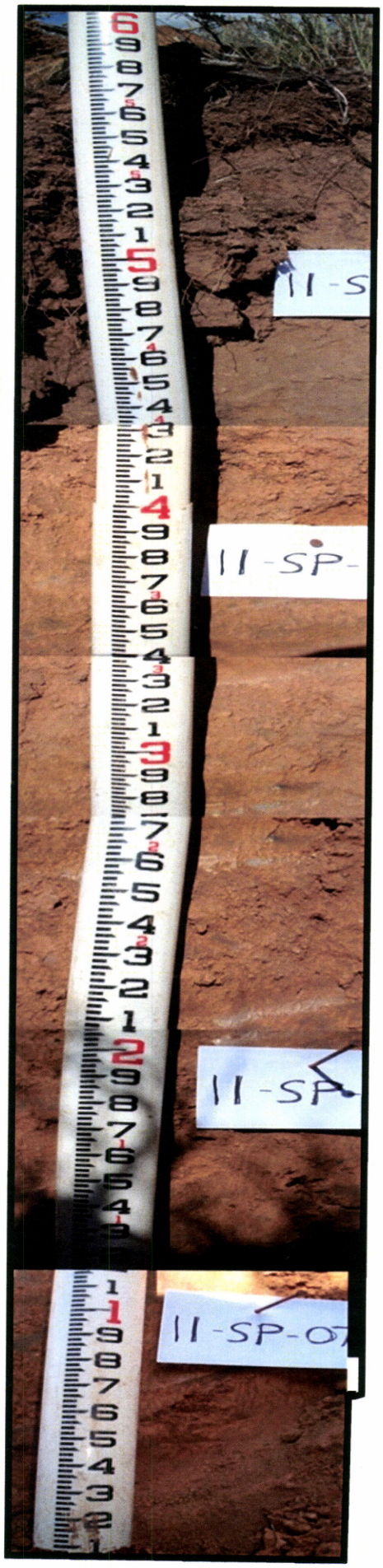
8-07
Kinney Soil Pit



9-07
Kinney Soil Pit



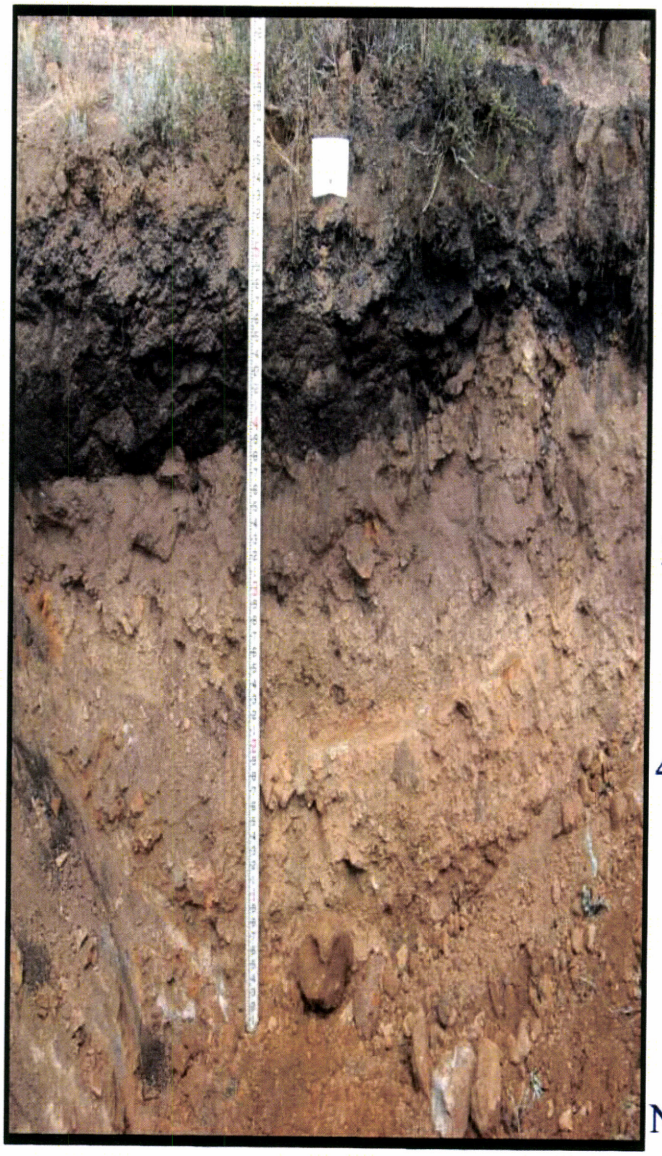
10-07
Kinney Soil Pit



11-07
Kinney Soil Pit

12-07
Kinney Soil Pit

13-07
Kinney Soil Pit
Also (10-MDS-3)



0-8 inches Overburden mix with est. 15% coal chunks

8-15 inches coal layer with some overburden

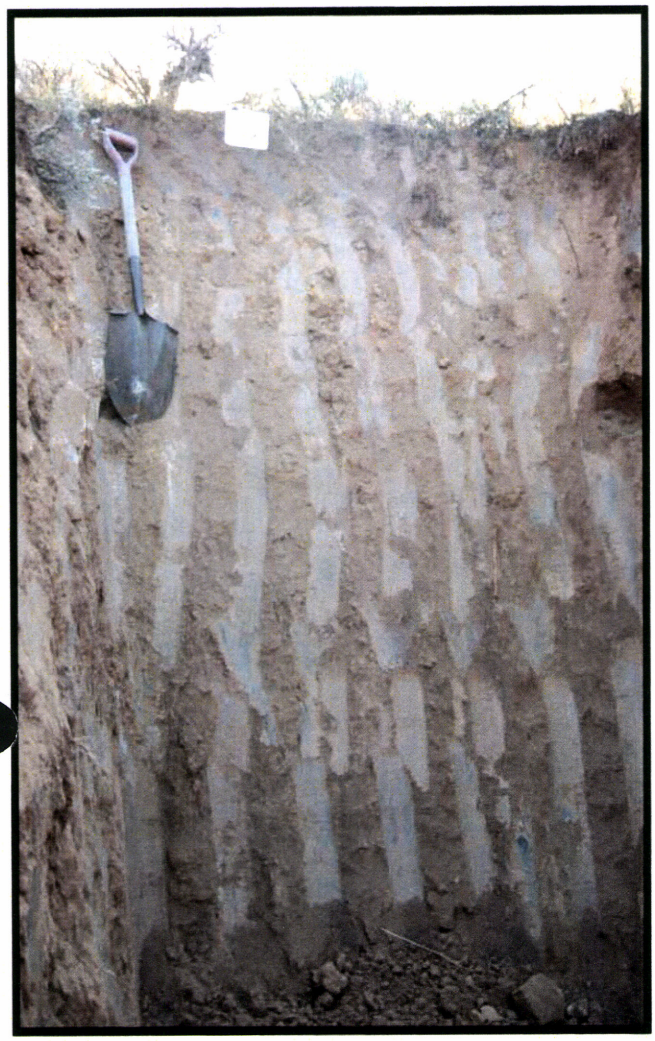
25-40 inches Buried B horizon

40-60 inches Buried B and C horizons

No potential topsoil at this site (map Unit DA)

Trackhoe trench site 10-MDS-3, Map unit DA

14-07
Kinney Soil Pit



C 30-60 inches sandier, lacks structure and chem. for topsoil material

Bw2 18-30 inches subsoil, same as Bw somewhat coarser

Bw 8-18 inches subsoil, good material

A 0-8 inches, potentially decent topsoil, pending lab results

14-SP-07 (Trackhoe trench 12-MDF-1) located approx. 50 ft. from canal on lowerfanslope, Map unit 2A.

15-CP-07
Trackhoe Pit

15-CP-07, measured on 9/7 had 4'11 inches of coal at "pinch out" beginning at 19 inch depth, followed by buried B or C soil horizons. Not sampled. Staked by lathe photographed by BC. Will send this one. Located in trackhoe parking area.

15-07
Kinney Soil Pit

11 inches potential topsoil, pending lab result

C 26-40 inches very boulder subsoil

Bw 11-26 inches very stony subsoil

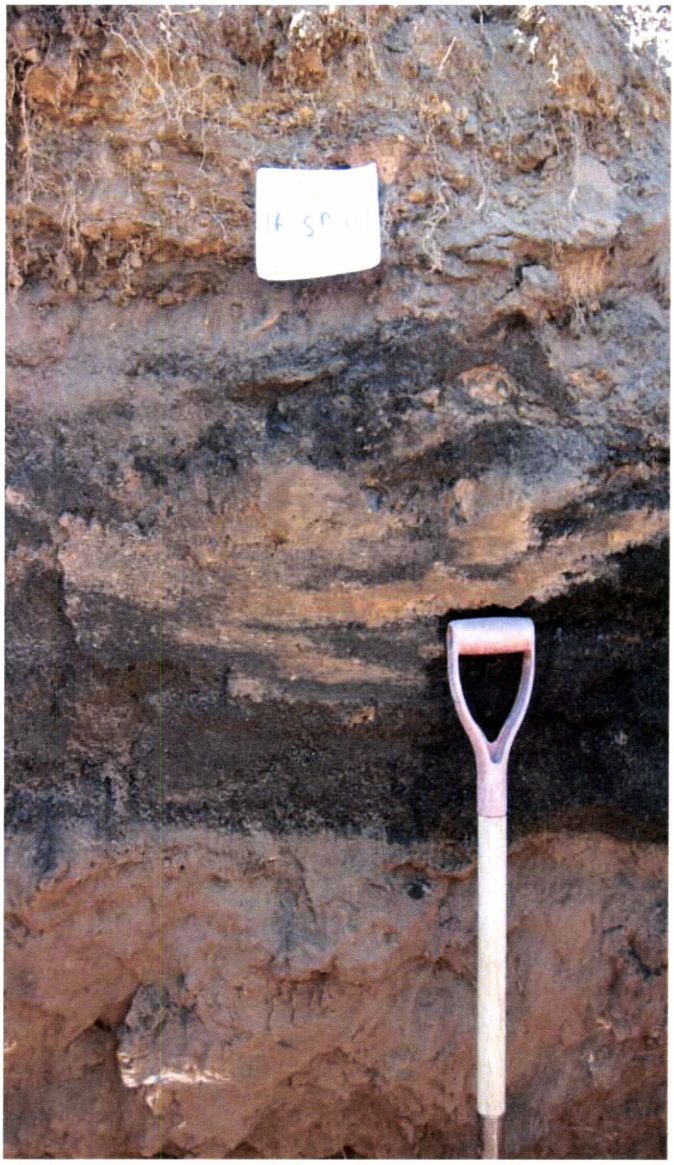
A2 5-11 inches topsoil, granular structure

A1 0-5 inches dark-colored topsoil

Oe I inch duff and organic matter layer

15-SP-07 Located near Kinney #1 mine portal Trackhoe scrapped in aspen grove roadcut on 9/7/07, not sapled Map Unit 1A

16-07
Kinney Soil Pit



No topsoil available at this site

13-60 inches Buried B horizon very stony

13-34 inches coal refuse

0-13 inches Overburden and 20% coal chunks in reclaimed materials (AMP cover

16-SP-07 (trackhoe site 13 WSF-2) located in DA map unit north end Hansen property, nearby 2006 soil pit.

18-07
Kinney Soil Pit

14 inches of potetial topsoil at this site Map unit 1A

C 36-60 inches

B 14-36 inches

A2 5-14 inches

A1 0-5 inches

18-SP-07 (trackhoe scrapped nearby Grimes Corner survey flagging, roadcut near Kinney 1 aspen grove). Sampled 9/7/07.

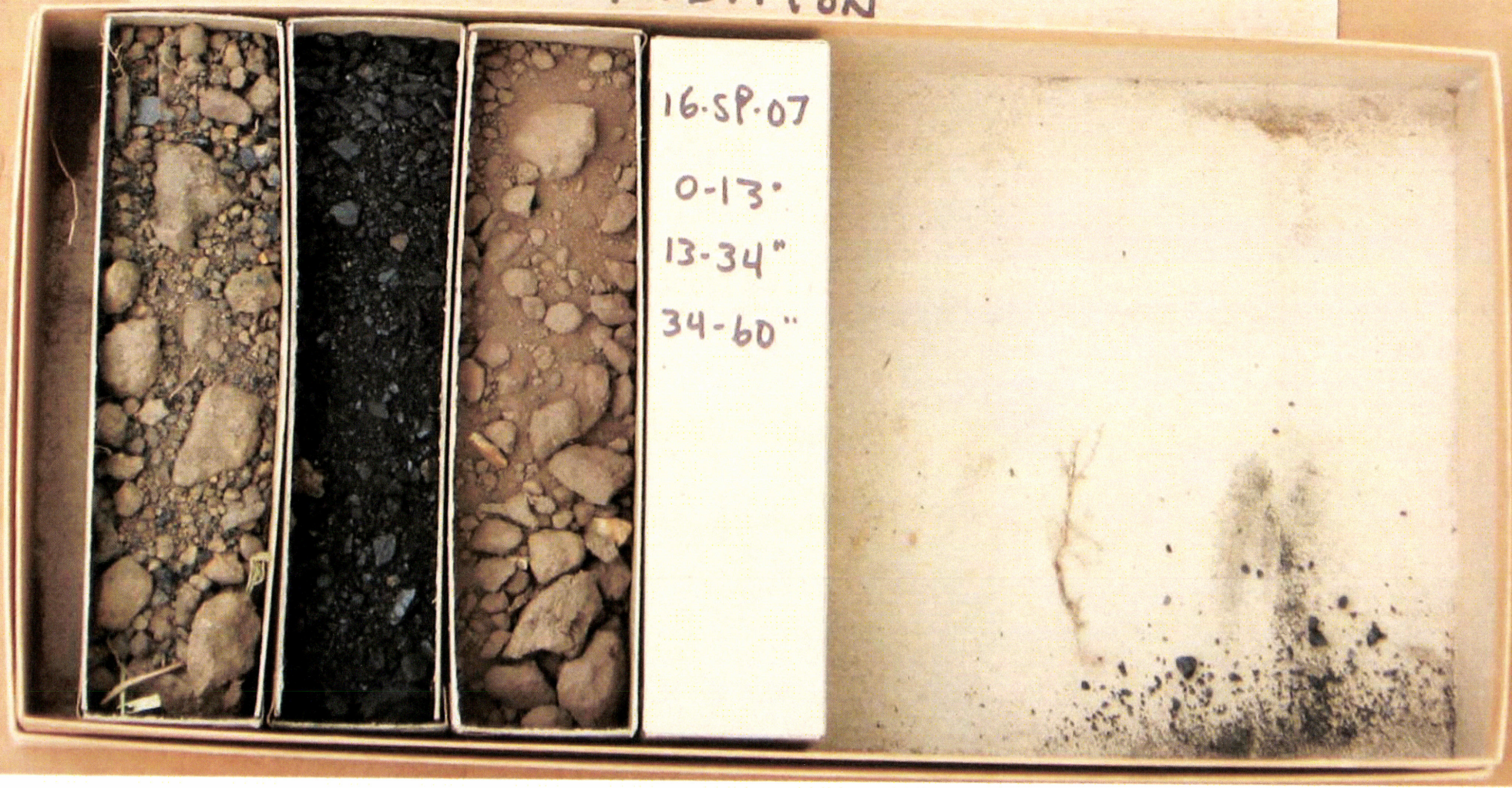
Appendix 5. Photographs of Soil Micromonolith Box Samples

APPENDIX 5: Micromonolith Photos

KINNEY MINE
SOIL SURVEY
SEPT 2007
HANSEN PROPERTY
ADDITION

KINNEY MINE
SOIL SURVEY
SEPT 2007
HANSEN PROPERTY
ADDITION

KINNEY MINE
SOIL SURVEY
SEPT 2007
HANSEN PROPERTY
ADDITION



KINNEY MINE

SOIL SURVEY

SEPT 2007

HANSEN PROPERTY

ADDITION

KINNEY MAINE

SOIL SURVEY

SEPT 2007

HANSEN PROPERTY

ADDITION

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SOIL SURVEY
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SEPT 2007

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SOIL SURVEY
SEPT 2007
HANSEN PROPERTY
ADDITION

KINNEY MINE
SOIL SURVEY
SEPT 2007
HANSEN PROPERTY
ADDITION

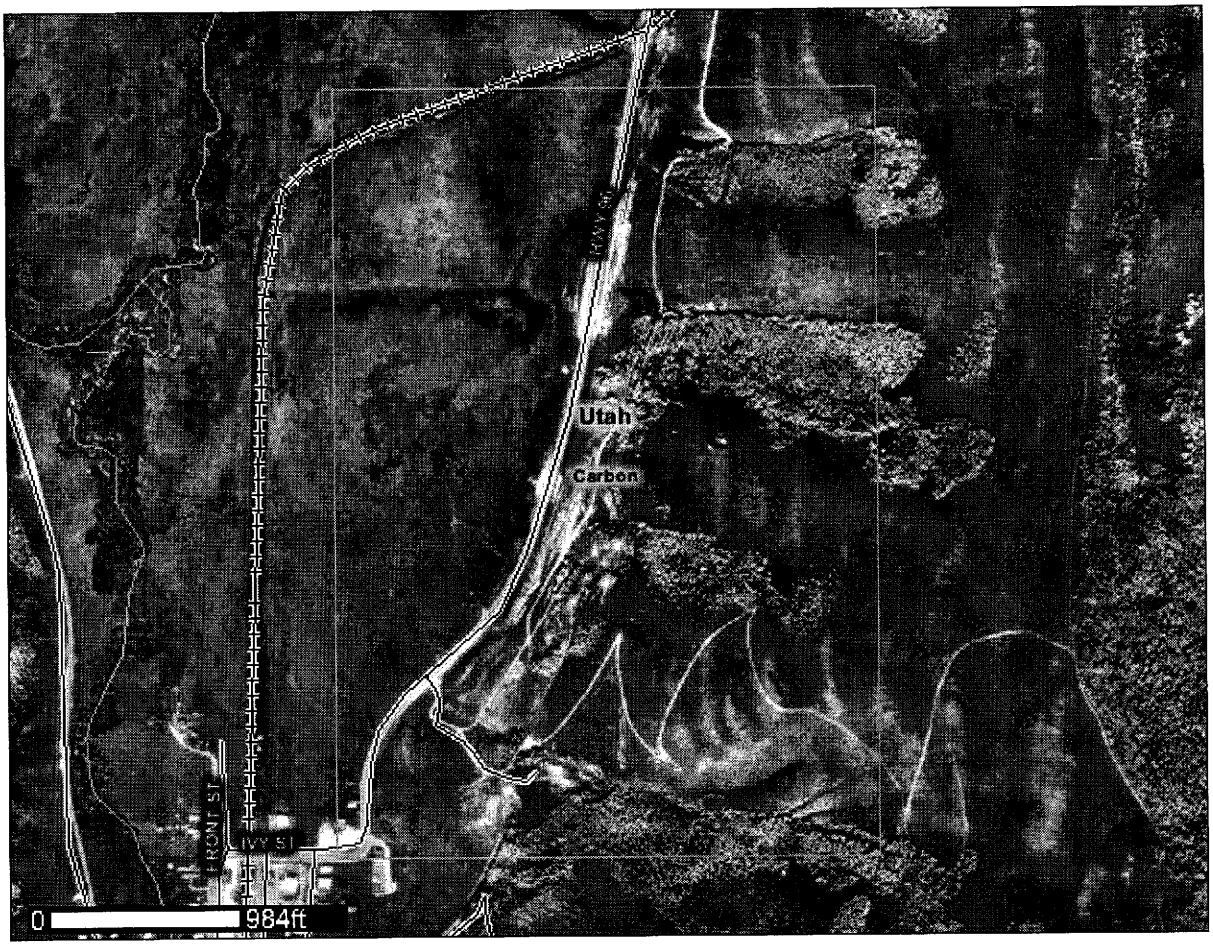
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Carbon Area, Utah, Parts of Carbon and Emery Counties



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features

Municipalities
- Cities
- Urban Areas

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails

Roads
- Interstate Highways
- US Routes
- State Highways
- Local Roads
- Other Roads

MAP INFORMATION

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 12N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Carbon Area, Utah, Parts of Carbon and Emery Counties
Survey Area Data: Version 3, Dec 14, 2006

Date(s) aerial images were photographed: 9/30/1997; 10/5/1997

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Carbon Area, Utah, Parts of Carbon and Emery Counties (UT616)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
29	Dumps,mine	23.0	9.2%
108	Silas loam	70.8	28.2%
109	Silas-Brycan loams	16.2	6.4%
117	Trag-Beje-Senchert complex	6.1	2.4%
118	Trag-Croydon complex	135.2	53.8%
Totals for Area of Interest (AOI)		251.3	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that

have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Carbon Area, Utah, Parts of Carbon and Emery Counties
Version date:12/14/2006 5:20:04 PM

29—Dumps,mine

Map Unit Composition
Dumps: 100 percent

Description of Dumps

Properties and qualities
Slope: 3 to 65 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Available water capacity: Very low (about 0.0 inches)

Interpretive groups
Land capability (nonirrigated): 8s

Typical profile
0 to 60 inches: Fragmental material

108—Silas loam

Map Unit Setting
Elevation: 7,180 to 7,680 feet
Mean annual precipitation: 16 to 20 inches
Mean annual air temperature: 38 to 45 degrees F
Frost-free period: 60 to 80 days

Map Unit Composition
Silas and similar soils: 80 percent
Minor components: 5 percent

Description of Silas

Setting
Landform: Valleys
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Alluvium derived from sandstone and shale

Properties and qualities
Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water capacity: High (about 9.6 inches)

Interpretive groups

Land capability (nonirrigated): 6w
Ecological site: Wet Fresh Meadow (Willow-Sedge) (R048AY008UT)

Typical profile

0 to 2 inches: Loam
2 to 17 inches: Loam
17 to 28 inches: Loam
28 to 43 inches: Loam
43 to 60 inches: Sandy clay loam

Minor Components

Silas, poorly drained

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: Wet Fresh Meadow (Willow-Sedge) (R048AY008UT)

109—Silas-Brycan loams

Map Unit Setting

Elevation: 7,680 to 8,580 feet
Mean annual precipitation: 16 to 20 inches
Mean annual air temperature: 38 to 45 degrees F
Frost-free period: 60 to 80 days

Map Unit Composition

Silas and similar soils: 65 percent
Brycan and similar soils: 20 percent
Minor components: 7 percent

Description of Silas

Setting

Landform: Valleys
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Alluvium derived from sandstone and shale

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water capacity: High (about 9.6 inches)

Interpretive groups

Land capability (nonirrigated): 6w

Ecological site: Wet Fresh Meadow (Willow-Sedge) (R048AY008UT)

Typical profile

0 to 2 inches: Loam
2 to 17 inches: Loam
17 to 28 inches: Loam
28 to 43 inches: Loam
43 to 60 inches: Sandy clay loam

Description of Brycan

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from sandstone and shale

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water capacity: High (about 9.9 inches)

Interpretive groups

Land capability (nonirrigated): 6c
Ecological site: MOUNTAIN LOAM (SALINA WILDRYE) (R048AY409UT)

Typical profile

0 to 12 inches: Loam
12 to 32 inches: Loam
32 to 60 inches: Silt loam

Minor Components

Silas, poorly drained

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: Wet Fresh Meadow (Willow-Sedge) (R048AY008UT)

Flooded soils

Percent of map unit: 2 percent
Landform: Flood plains
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear
Across-slope shape: Concave

117—Trag-Beje-Senchert complex

Map Unit Setting

Elevation: 7,180 to 8,480 feet
Mean annual precipitation: 16 to 22 inches
Mean annual air temperature: 37 to 45 degrees F
Frost-free period: 50 to 100 days

Map Unit Composition

Trag and similar soils: 45 percent
Senchert and similar soils: 15 percent
Beje and similar soils: 15 percent

Description of Trag

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Alluvium and/or colluvium derived from sandstone and shale

Properties and qualities

Slope: 3 to 30 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water capacity: High (about 10.8 inches)

Interpretive groups

Land capability (nonirrigated): 6e
Ecological site: MOUNTAIN LOAM (SALINA WILDRYE) (R048AY409UT)

Typical profile

0 to 5 inches: Clay loam
5 to 39 inches: Clay loam
39 to 60 inches: Clay loam

Description of Beje

Setting

Landform: Drainageways
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Slope alluvium and/or colluvium over residuum weathered from sandstone and shale

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water capacity: Very low (about 2.4 inches)

Interpretive groups

Land capability (nonirrigated): 6s
Ecological site: Mountain Shallow Loam (Mountain Big Sagebrush) (R047XA446UT)

Typical profile

0 to 6 inches: Loam
6 to 14 inches: Clay loam
14 to 18 inches: Unweathered bedrock

Description of Senchert

Setting

Landform: Drainageways, draws
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Colluvium and/or slope alluvium over residuum weathered from sandstone and shale

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Sodium adsorption ratio, maximum: 5.0
Available water capacity: Moderate (about 6.2 inches)

Interpretive groups

Land capability (nonirrigated): 6e
Ecological site: High Mountain Loam (Aspen) (R047XA508UT)

Typical profile

0 to 4 inches: Loam
4 to 16 inches: Loam
16 to 35 inches: Clay loam
35 to 39 inches: Unweathered bedrock

118—Trag-Croydon complex

Map Unit Setting

Elevation: 7,580 to 9,470 feet
Mean annual precipitation: 16 to 25 inches
Mean annual air temperature: 34 to 40 degrees F
Frost-free period: 40 to 80 days

Map Unit Composition

Trag and similar soils: 50 percent
Croydon and similar soils: 30 percent

Description of Trag

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Alluvium and/or colluvium derived from sandstone and shale

Properties and qualities

Slope: 30 to 60 percent
Surface area covered with cobbles, stones or boulders: 13.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water capacity: High (about 10.2 inches)

Interpretive groups

Land capability (nonirrigated): 7e
Ecological site: MOUNTAIN LOAM (SALINA WILDRYE) (R048AY409UT)

Typical profile

0 to 10 inches: Stony loam
10 to 36 inches: Clay loam
36 to 60 inches: Clay loam

Description of Croydon

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Colluvium and/or slope alluvium over residuum weathered from sandstone and shale

Properties and qualities

Slope: 30 to 50 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 8.1 inches)

Interpretive groups

Land capability (nonirrigated): 7e
Ecological site: High Mountain Loam (Aspen) (R047XA508UT)

Typical profile

0 to 16 inches: Loam
16 to 23 inches: Loam
23 to 48 inches: Clay loam
48 to 52 inches: Weathered bedrock

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RECLAIMED COAL: SGS Lab Sheets

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Analysis Report

August 13, 2010

Carbon Resources LLC
PO Box 11789
Albuquerque, NM 87192
USA

Client Sample ID:	4-CP	**Mine :**	Kinney Pad
Date Received:	09/24/2007	**Sample Type :**	-4 Mesh Moist
Matrix:	Coal		
Net Sample Weight:	1690.50		

SGS Minerals Sample ID: 072-28962-001

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	9.92		
% Ash	[ASTM D 3174/5142]	7.69	8.53	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	11266	12507	13674
% Sulfur	[ASTM D 4239]	0.52	0.58	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	6.82	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.46	lb	ASTM D 5865
Pounds of SO2/mm Btu	0.92	lb	ASTM D 5865

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Analysis Report

August 13, 2010

Carbon Resources LLC
PO Box 11789
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USA

Client Sample ID:	5-CP	**Mine :**	Kinney Pad
Date Received:	09/24/2007	**Sample Type :**	-4 Mesh Moist
Matrix:	Coal		
Net Sample Weight:	1976.90		

SGS Minerals Sample ID: 072-28962-002

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	9.60		
% Ash	[ASTM D 3174/5142]	9.09	10.06	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	11071	12247	13616
% Sulfur	[ASTM D 4239]	0.57	0.63	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	8.21	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.51	lb	ASTM D 5865
Pounds of SO2/mm Btu	1.03	lb	ASTM D 5865

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Albuquerque, NM 87192
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Client Sample ID:	6-CP	**Mine :**	Kinney Pad
Date Received:	09/24/2007	**Sample Type :**	-4 Mesh Moist
Matrix:	Coal		
Net Sample Weight:	1981.50		

SGS Minerals Sample ID: 072-28962-003

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	9.86		
% Ash	[ASTM D 3174/5142]	9.13	10.13	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	10803	11985	13336
% Sulfur	[ASTM D 4239]	0.56	0.62	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	8.45	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.52	lb	ASTM D 5865
Pounds of SO2/mm Btu	1.03	lb	ASTM D 5865

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Client Sample ID:	7-CP	**Mine :**	Kinney Pad
Date Received:	09/24/2007	**Sample Type :**	-4 Mesh Moist
Matrix:	Coal		
Net Sample Weight:	2054.90		

SGS Minerals Sample ID: 072-28962-004

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	9.16		
% Ash	[ASTM D 3174/5142]	8.92	9.82	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	11124	12245	13579
% Sulfur	[ASTM D 4239]	0.57	0.62	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	8.02	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.51	lb	ASTM D 5865
Pounds of SO2/mm Btu	1.02	lb	ASTM D 5865

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Client Sample ID:	8-CP	**Mine :**	Kinney Pad
Date Received:	09/24/2007	**Sample Type :**	-4 Mesh Moist
Matrix:	Coal		
Net Sample Weight:	1783.60		

SGS Minerals Sample ID: 072-28962-005

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	12.09		
% Ash	[ASTM D 3174/5142]	8.20	9.33	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	10584	12040	13279
% Sulfur	[ASTM D 4239]	0.51	0.58	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	7.75	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.48	lb	ASTM D 5865
Pounds of SO2/mm Btu	0.96	lb	ASTM D 5865

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August 13, 2010

Carbon Resources LLC
PO Box 11789
Albuquerque, NM 87192
USA

Client Sample ID: 9-CP
Date Received: 09/24/2007
Matrix: Coal
Net Sample Weight: 1660.50

Mine : Kinney Pad
Sample Type : -4 Mesh Moist

SGS Minerals Sample ID: 072-28962-006

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	9.51		
% Ash	[ASTM D 3174/5142]	8.54	9.43	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	11071	12234	13509
% Sulfur	[ASTM D 4239]	0.51	0.56	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	7.71	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.46	lb	ASTM D 5865
Pounds of SO2/mm Btu	0.92	lb	ASTM D 5865

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Client Sample ID:	10-CP	**Mine :**	Kinney Pad
Date Received:	09/24/2007	**Sample Type :**	-4 Mesh Moist
Matrix:	Coal		
Net Sample Weight:	1855.60		

SGS Minerals Sample ID: 072-28962-007

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	8.81		
% Ash	[ASTM D 3174/5142]	8.95	9.81	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	11181	12261	13596
% Sulfur	[ASTM D 4239]	0.60	0.66	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	8.00	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.54	lb	ASTM D 5865
Pounds of SO2/mm Btu	1.08	lb	ASTM D 5865

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August 13, 2010

Carbon Resources LLC
PO Box 11789
Albuquerque, NM 87192
USA

Client Sample ID: 11-CP
Date Received: 09/24/2007
Matrix: Coal
Net Sample Weight: 1961.30

Mine : Kinney Pad
Sample Type : -4 Mesh Moist

SGS Minerals Sample ID: 072-28962-008

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	10.61		
% Ash	[ASTM D 3174/5142]	11.42	12.77	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	10486	11730	13448
% Sulfur	[ASTM D 4239]	0.46	0.52	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	10.89	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.44	lb	ASTM D 5865
Pounds of SO2/mm Btu	0.88	lb	ASTM D 5865

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August 13, 2010

Carbon Resources LLC
PO Box 11789
Albuquerque, NM 87192
USA

Client Sample ID:	12-CP	**Mine :**	Kinney Pad
Date Received:	09/24/2007	**Sample Type :**	-4 Mesh Moist
Matrix:	Coal		
Net Sample Weight:	1967.70		

SGS Minerals Sample ID: 072-28962-009

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	9.46		
% Ash	[ASTM D 3174/5142]	8.85	9.77	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	10941	12084	13393
% Sulfur	[ASTM D 4239]	0.50	0.55	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	8.09	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.46	lb	ASTM D 5865
Pounds of SO2/mm Btu	0.91	lb	ASTM D 5865

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Analysis Report

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Carbon Resources LLC
PO Box 11789
Albuquerque, NM 87192
USA

Client Sample ID:	13-CP	**Mine :**	Kinney Pad
Date Received:	09/24/2007	**Sample ID :**	W 1' 4' ?
Matrix:	Coal	**Sample Type :**	-4 Mesh Moist
Net Sample Weight:	1588.20		

SGS Minerals Sample ID: 072-28962-010

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	10.42		
% Ash	[ASTM D 3174/5142]	8.55	9.55	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	11018	12299	13597
% Sulfur	[ASTM D 4239]	0.52	0.58	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	7.76	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.47	lb	ASTM D 5865
Pounds of SO2/mm Btu	0.94	lb	ASTM D 5865

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August 13, 2010

Carbon Resources LLC
PO Box 11789
Albuquerque, NM 87192
USA

Client Sample ID:	15-CS-1	**Mine :**	Kinney Pad
Date Received:	09/24/2007	**Sample Type :**	-4 Mesh Moist
Matrix:	Coal		
Net Sample Weight:	2415.60		

SGS Minerals Sample ID: 072-28962-011

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	9.22		
% Ash	[ASTM D 3174/5142]	13.17	14.51	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	9986	10999	12866
% Sulfur	[ASTM D 4239]	0.45	0.50	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	13.19	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.45	lb	ASTM D 5865
Pounds of SO2/mm Btu	0.91	lb	ASTM D 5865

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Analysis Report

August 13, 2010

Carbon Resources LLC
PO Box 11789
Albuquerque, NM 87192
USA

Client Sample ID:	9-B	**Mine :**	Kinney Pad
Date Received:	09/24/2007	**Sample ID :**	30 - 52 Clean Coal
Matrix:	Coal	**Sample Type :**	-4 Mesh Moist
Net Sample Weight:	1971.30		

SGS Minerals Sample ID: 072-28962-012

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	8.48		
% Ash	[ASTM D 3174/5142]	11.75	12.84	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	10581	11562	13265
% Sulfur	[ASTM D 4239]	0.66	0.72	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	11.11	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.62	lb	ASTM D 5865
Pounds of SO2/mm Btu	1.24	lb	ASTM D 5865

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Client Sample ID:	D-4	**Mine :**	Kinney Pad
Date Received:	09/24/2007	**Sample ID :**	19" - 72"
Matrix:	Coal	**Sample Type :**	-2" Moist
Net Sample Weight:	3054.40		

SGS Minerals Sample ID: 072-28962-013

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	12.47		
% Ash	[ASTM D 3174/5142]	41.28	47.16	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	5929	6774	12820
% Sulfur	[ASTM D 4239]	0.44	0.51	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	69.62	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.75	lb	ASTM D 5865
Pounds of SO2/mm Btu	1.49	lb	ASTM D 5865

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Client Sample ID:	DA-9-B	**Mine :**	Kinney Pad
Date Received:	09/24/2007	**Sample ID :**	14" - 54"
Matrix:	Coal	**Sample Type :**	-2" Moist
Net Sample Weight:	3852.40		

SGS Minerals Sample ID: 072-28962-014

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	15.19		
% Ash	[ASTM D 3174/5142]	34.89	41.14	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	6496	7660	13013
% Sulfur	[ASTM D 4239]	0.40	0.47	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	53.71	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.61	lb	ASTM D 5865
Pounds of SO2/mm Btu	1.22	lb	ASTM D 5865

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SGS

Analysis Report

August 13, 2010

Carbon Resources LLC
PO Box 11789
Albuquerque, NM 87192
USA

Client Sample ID:	D9-A Coal	**Mine :**	Kinney Pad
Date Received:	09/24/2007	**Sample Type :**	-2" Moist
Matrix:	Coal		
Net Sample Weight:	1653.10		

SGS Minerals Sample ID: 072-28962-015

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	7.29		
% Ash	[ASTM D 3174/5142]	34.08	36.76	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	7726	8333	13176
% Sulfur	[ASTM D 4239]	0.55	0.59	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	44.11	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.71	lb	ASTM D 5865
Pounds of SO2/mm Btu	1.42	lb	ASTM D 5865

Somer Rodriguez, Denver Laboratory

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SGS

Analysis Report

August 13, 2010

Carbon Resources LLC
PO Box 11789
Albuquerque, NM 87192
USA

Client Sample ID:	D9-A	**Mine :**	Kinney Pad
Date Received:	09/24/2007	**Sample ID :**	Coal Spa?
Matrix:	Coal	**Sample Type :**	-2" Moist
Net Sample Weight:	2990.00		

SGS Minerals Sample ID: 072-28962-016

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	6.81		
% Ash	[ASTM D 3174/5142]	37.09	39.80	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	7312	7847	13035
% Sulfur	[ASTM D 4239]	0.52	0.55	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	50.72	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.71	lb	ASTM D 5865
Pounds of SO2/mm Btu	1.41	lb	ASTM D 5865

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Analysis Report

August 13, 2010

Carbon Resources LLC
PO Box 11789
Albuquerque, NM 87192
USA

Client Sample ID:	D-11	**Mine :**	Kinney Pad
Date Received:	09/24/2007	**Sample ID :**	11 - 48 Coal Material
Matrix:	Coal	**Sample Type :**	-2" Moist
Net Sample Weight:	2812.30		

SGS Minerals Sample ID: 072-28962-017

		As Received	Dry	MAF
% Moisture, Total	[ASTM D 3302]	11.33		
% Ash	[ASTM D 3174/5142]	34.95	39.41	
Gross Calorific Value (Btu/lb)	[ASTM D 5865]	7063	7965	13146
% Sulfur	[ASTM D 4239]	0.41	0.46	

Tests	Result	Unit	Method
Pounds of Ash/mm Btu	49.48	lb	ASTM D 5865
Pounds of Sulfur/mm Btu	0.57	lb	ASTM D 5865
Pounds of SO2/mm Btu	1.15	lb	ASTM D 5865

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Exhibit 7

Vegetation Information

VEGETATION OF THE KINNEY NO. 2 MINE SITE

Prepared by

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for

CARBON RESOURCES
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September 2007

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INTRODUCTION

The old Kinney No. 2 mine area, an historical coal mining site, has been proposed to be the location for new mining activities. The site is located in Carbon County, Utah just northeast of the town of Scofield. Elevation of the permit area ranges from approximately 7,700 to 8,600 ft above sea level, with most of the surface facilities proposed in the lower elevations of that range.

Most of the vegetation proposed to be disturbed by the new mining activities have already been disturbed by the previous mining operations mentioned above. However, a sagebrush/grass community that has not been disturbed previously could also be impacted by the new mine.

The purpose of this document is to report the findings from quantitative sampling the plant communities that could be impacted by the proposed new mining activities. The communities that may be affected are: 1) the previously disturbed (presently rabbitbrush/grass) community, and 2) a native sagebrush/grass community. Additionally, a reference area to be used for future revegetation success standards has also been chosen and sampled for this study. A vegetation map showing the plant communities within and adjacent to the permit area has been included in this report ~~prepared and included in the Mining & Reclamation Plan (MRP) for the new Kinney No. 2 Mine site~~ [~~(~~Map ~~5~~ 1-B, ~~Regional Vegetation~~ Vegetation (Aerial View)]. This map also shows the sample areas where the quantitative data were collected to compile this report.

METHODS

Methodologies used for this study were performed in accordance with the guidelines supplied by the State of Utah, Division of Oil, Gas and Mining (DOGM). Quantitative and qualitative data were taken in the plant communities that have been proposed for disturbance area along with a reference area chosen to represent them at the time of final reclamation and revegetation. These datasets were recorded August 8-9, 2007.

Sample Areas

GPS coordinates within the sample areas are provided below.

GPS COORDINATES FOR THE VEGETATION SAMPLE AREAS OF THE KINNEY NO. 2 MINE (August 2007; UTM NAD 27)

Community Name	Zone	Easting	Northing	Notes
Rabbitbrush/Grass	12	0486865 0486783	4397843 4397713	a) Area was previously disturbed by mining, b) was a sagebrush/grass community prior to disturbance, c) coordinates represent centers of transect lines.
Sagebrush/Grass	12	0486953 0486920	4397681 4397737	a) Proposed disturbed native undisturbed community, b) coordinates represent centers of transect lines.
Reference Area	12	0487053	4397766	a) Native, undisturbed community sagebrush/grass community, b) coordinates represent center of transect line.

Sampling Design and Transect/Quadrat Placement

Transect lines for vegetation sampling were placed randomly within the boundaries of the proposed disturbed and reference areas. The transect placement technique was employed with the goal to adequately sample a representative subset of the entire site as a whole. Once the transects were established, quadrat locations for sampling were chosen using random numbers from the transect lines with the objective to record data without preconceived bias.

Cover and Composition

Cover estimates were made using ocular methods with meter square quadrats. Species composition, cover by species, and relative frequencies were also assessed from the quadrats. Additional information recorded on the raw data sheets were: estimated precipitation, slope, exposure, grazing use, animal disturbance and other appropriate notes. Plant nomenclature follows "A Utah Flora" (Welsh et al., 2003).

Woody Species Density

Density of woody plant species for the proposed disturbed and reference areas was estimated using the point-quarter method. In this method, random points were placed on the sample sites and measured into four quarters. The distances to the nearest woody plant species were then recorded in each quarter. The average point-to-individual distance was equal to the square root

of the mean area per individual. The number of individuals per acre was the end results of the calculations.

Sample Size & Adequacy

Sampling adequacy for cover and density was attempted by using the formula given below.

$$nMIN = \frac{t^2 s^2}{(dx)^2}$$

where,

nMIN	= minimum adequate sample
t	= appropriate confidence t-value
s	= standard deviation
x	= sample mean
d	= desired change from mean

Statistical Analyses

Student's t-tests were employed to compare the total living cover and total woody species density of the proposed disturbed sites with the reference area.

Photographs

Color photographs of the sample areas were taken at the time of sampling and have been

included in this report.

Threatened & Endangered Plant Species

Prior to the field work, a list of those plant species that could be in the area and have been identified by agencies as rare, sensitive, threatened or endangered was prepared. Habitats were surveyed for these species at the mine site prior to and during the sample period.

Raw Data

The raw data have been summarized on spreadsheets and are available upon request.

RESULTS

Previously Disturbed Areas

Most of the plant communities in the permit area that have been proposed for disturbance by the new mining operations were impacted previously by other activities, most of which were a result of the historical mining mentioned above. A very small proportion of these disturbances were within aspen communities, but most were within sagebrush/grass communities.

The "previously disturbed area", one area that has been proposed for new disturbance by the proposed mine, was quantitatively sampled by placing sample quadrats over the entire area [see [~~(~~*Map ~~5~~ 1-B, ~~Regional Vegetation~~ Vegetation (Aerial View)* ~~included in the MRP~~ *and Color Photographs of the Sample Areas (included in this report)*]. The dominant plant species in the previously disturbed area were those one would expect in a plant community that has been impacted and not reclaimed, including the shrub, rubber rabbitbrush (*Chrysothamnus nauseosus*), and grasses such as Western wheatgrass (*Elymus smithii*) and Kentucky bluegrass (*Poa pratensis*). Prior to disturbance, the community was once primarily a sagebrush/grass community. There were also several forb species present in the sample quadrats, each of which comprised less than 2 percent of the living cover. Examples of these forbs were native species such as hoary aster (*Machaeranthera canescens*), silky lupine (*Lupinus sericeus*), Engelmann's daisy *(Erigeron engelmannii*) and other "weedy", exotic species such as houndstongue (*Cynoglossum officinale*), and dandelion (*Taraxacum officinale*). A list of all plant species present in the sample quadrats placed in the previously disturbed area is shown on Table 1.

The total living cover of the community was estimated at 39.50% (Table 2-A). Composition of the cover was comprised of 44.73% shrubs, 34.09% grasses and 21.18% forbs (Table 2-B). Woody species density measurements were also recorded. The total number per acre was only 210 individuals, most of which were rubber rabbitbrush (Table 3).

Proposed Disturbed Sagebrush/Grass

The major plant community that has *not* been previously disturbed, but may also be impacted by the proposed new mining activities, is a sagebrush/grass community area ~~area [see~~ [see ~~(~~*Map ~~5~~ 1-B,* ~~*Regional Vegetation*~~ *Vegetation (Aerial View)* ~~*included in the MRP*~~ *and Color Photographs of the Sample Areas (included in this report)*]. The two dominant plant species in the community by a wide margin were: the shrub, Vasey sagebrush (*Artemisia tridentata* var. *vaseyana*) and the grass, bluestem wheatgrass (*Elymus spicatus*). The next most common shrub was viscid rabbitbrush (*Chrysothamnus viscidiflorus*), and the next most common grass was Kentucky bluegrass. There were also several native forb species present in the sample quadrats, the most common of which was Watson's penstemon (*Penstemon watsonii*). For a complete listing of the plants present in the quadrats including all cover and frequency values, refer to Table 4.

The total living cover of the sagebrush/grass community was estimated 63.83% (Table 5-A). In the living cover, 55.42% of it was comprised of shrubs, 34.98% grasses and 9.60% forbs (Table 5-B). Woody species density was estimated 7,573 plants per acre (Table 6) with the three most common shrubs as Vasey sagebrush, viscid rabbitbrush and snowberry (*Symphoricarpos oreophilus*).

Sagebrush/Grass Reference Area

Another native sagebrush/grass community that will remain undisturbed was chosen in the

immediate area to represent future standards for revegetation success ~~see~~ [see ~~(~~*Map ~~5~~ 1-B, ~~Regional Vegetation~~ Vegetation (Aerial View)~~ included in the MRP~~ and Color Photographs of the Sample Areas (included in this report)*]. This community was sampled so that it could be compared statistically at this time with the sagebrush/grass community proposed for disturbance to make sure it would be an appropriate area to be used for future revegetation success standards.

Very much like the proposed disturbed sagebrush/grass community it was chosen to represent and be compared with, the most common shrubs here were Vasey sagebrush and viscid rabbitbrush; the most common grasses were bluebunch wheatgrass and Kentucky bluegrass. Forbs species were also similar to the community proposed for disturbance (Table 7).

The total living cover for the reference area was 60.83% (Table 8-A). The composition of the cover by lifeform was represented by 61.42% shrubs, 28.15% grasses and 10.43% forbs (Table 8-B). The total woody species density for the community was 7,595 plants per acre with the same species for dominants as the area proposed for disturbance (Table 9).

Threatened & Endangered Plant Species Survey

No rare, threatened, endangered, endemic or otherwise sensitive plant species were found in the areas proposed for new disturbance.

Table 1: Kinney No. 2 Mine. Living Cover and Frequency by Plant Species (2007).

Community: Rabbitbrush/Grass (Previously Disturbed)	Mean Percent	Standard Deviation	Percent Frequency
OVERSTORY			
Populus tremuloides	1.50	7.76	4.00
UNDERSTORY			
SHRUBS			
Amelanchier utahensis	0.10	0.70	2.00
Artemisia tridentata	4.30	6.40	38.00
Chrysothamnus nauseosus	11.46	15.95	60.00
Mahonia repens	0.10	0.70	2.00
Purshia tridentata	0.50	2.50	4.00
Rosa woodsii	0.10	0.70	2.00
Symphoricarpos oreophilus	2.20	6.57	14.00
FORBS			
Cynoglossum officinale	0.10	0.70	2.00
Erigeron engelmannii	1.10	3.36	10.00
Geranium richardsonii	0.10	0.70	2.00
Grindelia squarrosa	0.60	2.15	8.00
Ipomopsis aggregata	0.20	1.40	2.00
Lupinus sericeus	1.30	3.85	12.00
Machaeranthera canescens	1.50	3.20	20.00
Melilotus officinalis	0.40	1.36	8.00
Polygonum aviculare	0.40	2.80	2.00
Taraxacum officinale	0.60	2.15	8.00
GRASSES			
Agropyron cristatum	0.40	2.20	4.00
Bromus tectorum	0.80	3.79	6.00
Elymus smithii	7.34	10.01	50.00
Elymus spicatus	0.20	1.40	2.00
Hordeum jubatum	0.10	0.70	2.00
Poa pratensis	4.10	8.58	24.00

Table 2: Kinney No. 2 Mine. Total Cover and Composition (2007).		
Community: Rabbitbrush/Grass (Previously Disturbed)		
A. TOTAL COVER	Mean Percent	Standard Deviation
Overstory (O)	1.50	7.76
Understory (U)	38.00	18.17
Litter	14.20	13.01
Bareground	25.40	19.69
Rock	22.40	16.77
O+ U	39.50	20.16
B. % COMPOSITION		
% COMPOSITION		
Shrubs	44.73	34.28
Forbs	21.18	29.68
Grasses	34.09	28.51

Table 3: Kinney No. 2 Mine. Total Cover and Composition (2007).	
Community: Rabbitbrush/Grass (Previously Disturbed)	
SPECIES	**Individuals Per Acre**
Amelanchier utahensis	
Artemisia tridentata	63.92
Cercocarpus oreophilus	1.05
Chrysothamnus nauseosus	116.31
Chrysothamnus viscidiflorus	1.05
Populus tremuloides	4.19
Purshia tridentata	5.24
Rosa woodsii	1.05
Symphoricarpos oreophilus	16.76
TOTAL	**209.56**

Table 4: Kinney No. 2 Mine. Living Cover and Frequency by Plant Species (2007).

Community: Sagebrush/Grass (Proposed Disturbed)	Mean Percent	Standard Deviation	Percent Frequency
SHRUBS			
Amelanchier utahensis	1.33	4.07	10.00
Artemisia tridentata var. vaseyana	18.50	12.59	93.33
Chrysothamnus viscidiflorus	7.50	8.24	56.67
Mahonia repens	0.17	0.90	3.33
Purshia tridentata	2.33	5.28	23.33
Symphoricarpos oreophilus	5.83	6.59	56.67
FORBS			
Astragalus sp.	0.33	1.80	3.33
Cirsium sp.	0.33	1.25	6.67
Eriogonum sp.	1.17	2.79	16.67
Hedysarum boreale	1.17	2.48	20.00
Lupinus sericeus	0.83	4.49	3.33
Machaeranthera canescens	0.17	0.90	3.33
Penstemon watsonii	2.00	3.56	26.67
GRASSES			
Elymus spicatus	13.17	13.63	70.00
Poa pratensis	0.50	2.69	3.33
Poa secunda	8.17	8.90	60.00
Stipa comata	0.33	1.80	3.33

Table 5: Kinney No. 2 Mine. Total Cover and Composition (2007).

Community: Sagebrush/Grass (Proposed Disturbed)	Mean Percent	Standard Deviation
A. TOTAL COVER		
Total Living Cover	63.83	6.41
Litter	15.73	9.82
Bareground	10.07	7.37
Rock	10.37	10.63
B. % COMPOSITION		
Shrubs	55.42	18.54
Forbs	9.60	11.07
Grasses	34.98	18.45

Table 6: Kinney No. 2 Mine. Total Cover and Composition (2007).

Community: Sagebrush/Grass (Proposed Disturbed)	
SPECIES	**Individuals Per Acre**
Amelanchier utahensis	63.11
Artemisia tridentata var. vaseyana	3912.62
Chrysothamnus nauseosus	63.11
Chrysothamnus viscidiflorus	1640.78
Purshia tridentata	378.64
Symphoricarpos oreophilus	1514.56
TOTAL	**7572.81**

Table 7: Kinney No. 2 Mine. Living Cover and Frequency by Plant Species (2007).

Community: Sagebrush/Grass (Reference Area)			
TREES & SHRUBS	Mean Percent	Standard Deviation	Percent Frequency
Artemisia tridentata var. vaseyana	26.33	10.72	100.00
Chrysothamnus nauseosus	1.17	4.78	6.67
Chrysothamnus viscidiflorus	6.50	6.21	60.00
Purshia tridentata	0.83	3.67	6.67
Symphoricarpos oreophilus	3.00	6.14	26.67
FORBS			
Castilleja sp.	0.17	0.90	3.33
Eriogonum sp.	1.67	3.50	23.33
Hedysarum boreale	1.50	2.93	23.33
Lupinus sericeus	1.00	3.27	10.00
Penstemon watsonii	2.00	2.45	40.00
GRASSES			
Elymus salinus	0.33	1.25	6.67
Elymus spicatus	9.33	7.04	73.33
Poa pratensis	0.33	1.25	6.67
Pos secunda	6.67	7.89	56.67

Table 8: Kinney No. 2 Mine. Total Cover and Composition (2007).

Community: Sagebrush/Grass (Reference Area)		
A. TOTAL COVER	Mean Percent	Standard Deviation
Total Living Cover	60.83	7.75
Litter	11.50	6.08
Bareground	16.80	9.11
Rock	10.87	7.82
B. % COMPOSITION		
Shrubs	61.42	14.19
Forbs	10.43	9.79
Grasses	28.15	12.56

Table 9: Kinney No. 2 Mine. Total Cover and Composition (2007).

Community: Sagebrush/Grass (Reference Area)	
SPECIES	**Individuals Per Acre**
Amelanchier utahensis	126.58
Artemisia tridentata var. vaseyana	4999.96
Chrysothamnus nauseosus	126.58
Chrysothamnus viscidiflorus	1455.68
Juniperus scopulorum	63.29
Purshia tridentata	63.29
Symphoricarpos oreophilus	759.49
TOTAL	**7594.88**

SUMMARY & DISCUSSION

Statistical comparisons of the total living cover and woody species density values were made between the areas proposed for disturbance by mining activities and the reference area chosen to represent future revegetation success standards. When the total living cover of the previously disturbed rabbitbrush/grass community (also proposed for new disturbance) was compared to the sagebrush/grass reference area, results suggested the reference area had significantly more cover (Figure 1-A). Similarly, when woody species density of these two areas were compared, results again suggested there was a significant difference with a greater density value for the reference

FIGURE 1. A statistical comparison (Student's t-tests) of the **total living cover** between the proposed disturbed (previously disturbed and undisturbed) and reference areas.

	$\bar{x}$	s	n	t	df	SL
A. Rabbitbrush/Grass						
Previously Disturbed:	39.50	20.16	50			
Reference Area:	60.83	7.75	30			
t-test				-5.543	78	p<0.001
B. Sagebrush/Grass						
Proposed Disturbed:	63.83	6.41	30			
Reference Area:	60.83	7.75	30			
t-test				1.634	58	N.S.

$\bar{x}$ = mean
s = standard deviation
n = sample size
t = Student's t-value
df = degrees of freedom
p = probability
SL= Significance Level

area (Figure 2-A).

Next, the total living cover value of the proposed disturbed (currently undisturbed) sagebrush/grass community was compared with the reference area – the differences were non-significant (Figure 1-B). The woody species densities of these two communities were also non-significant (Figure 2-B).

As described above, much of the area has been previously disturbed by earlier mining and other activities. Although the quantitative data of the previously disturbed rabbitbrush/grass community was compared to the reference area at this time, future success standards may be different. State

FIGURE 2. A statistical comparison (Student's t-tests) of the **woody species density** between the proposed disturbed (previously disturbed and undisturbed) reference areas.

	$\bar{x}$	s	n	t	df	SL
A. Rabbitbrush/Grass						
Previously Disturbed:	209.56	1138.85	50			
Reference Area:	7594.88	2309.39	30			
t-test				-19.119	78	p<0.001
B. Sagebrush/Grass						
Proposed Disturbed:	7572.81	2575.81	30			
Reference Area:	7594.88	2309.39	30			
t-test				-0.035	58	N.S.

$\bar{x}$ = mean
s = standard deviation
n = sample size
t = Student's t-value
df = degrees of freedom
SL= Significance Level

regulations (R645-301-356.250) indicates that "*areas previously disturbed by mining that were not reclaimed to the requirements of R645-200 through R645-203 and R645-301 through R645-302 and that are remined or otherwise redisturbed by coal mining and reclamation operations, at a minimum, the vegetative ground cover will be not less than the ground cover existing before redisturbance and will be adequate to control erosion*". To address this issue, a discussion about reclamation and revegetation standards should be provided in the Mining & Reclamation Plan for the Kinney No. 2 Mine.

For those areas that will be disturbed by the proposed new mining activities that have *not* been previously impacted such as the sagebrush/grass community described in this report, the state regulations (R645-301.353) require that the final established plant communities: 1) *be diverse, effective, and permanent,* 2) *be comprised of species native to the area, or of introduced species where desirable and necessary to achieve the approved postmining land use and approved by the Division,* 3) *be at least equal in extent of cover to the natural vegetation of the area,* 4) *be capable of stabilizing the soil surface from erosion,* 5) *be compatible with the approved postmining land use,* 6) *have the same seasonal characteristics of growth as the original vegetation,* 7) *be capable of self-regeneration and plant succession, and* 8) *be compatible with the plant and animal species of the area.*

Small and comparatively inconsequential stands of aspen trees presently exist in the previously disturbed areas. Sample quadrats were also placed in these stands of trees. Because of the relative small area that these stands comprise, and because they too were disturbed previously

and will be subject to the rules described above for areas previously impacted and not reclaimed, data for these aspen stands have been included with the other previously disturbed community dataset. Accordingly, this dataset will represent the previously disturbed area as a whole, rather than attempting to separate or subdivide it.

The reference area chosen and compared statistically to the proposed disturbed (currently undisturbed) sagebrush/grass community should provide a community with adequate standards to achieve the required characteristics described above for the reclaimed areas at time of final reclamation and revegetation of the Kinney No. 2 Mine.

COLOR PHOTOGRAPHS
OF THE
SAMPLE AREAS

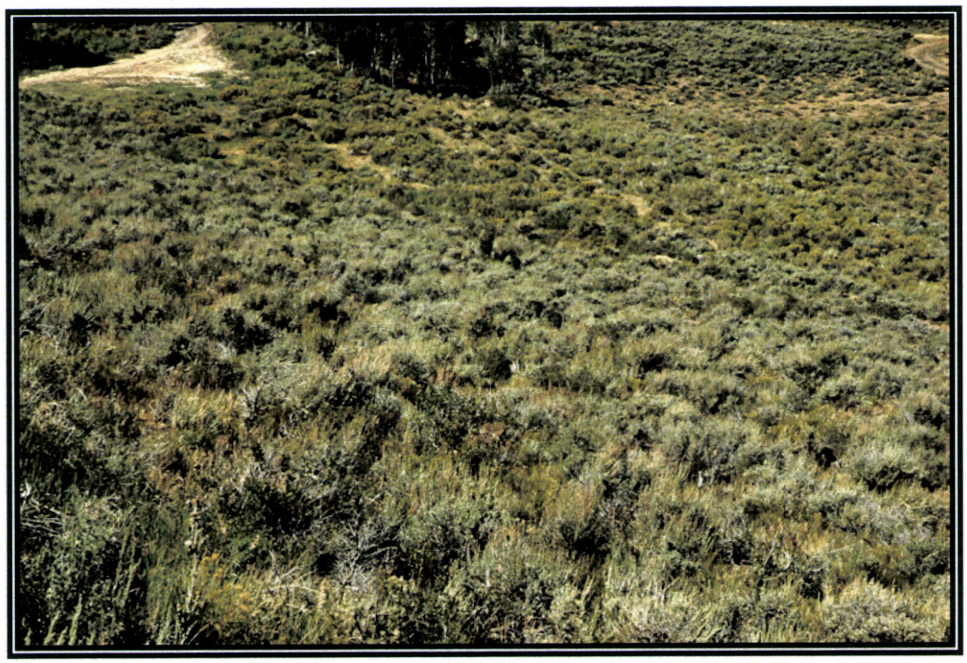


Photo 1: Sagebrush/Grass (Proposed Disturbed)

Photo 2: Sagebrush/Grass (Proposed Disturbed)

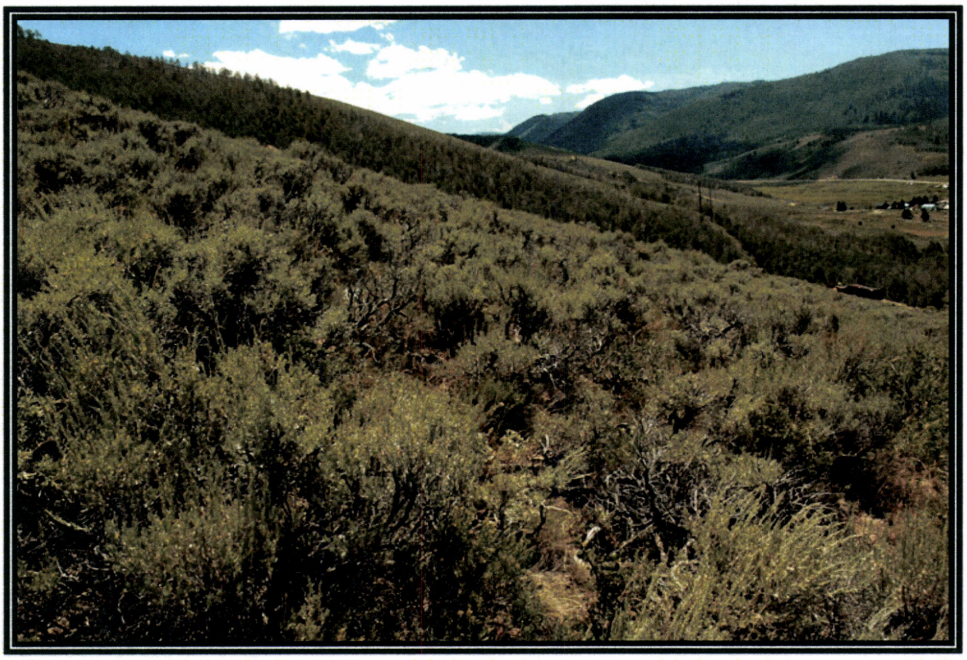


Photo 3: Sagebrush/Grass (Reference Area)

Photo 4: Sagebrush/Grass (Reference Area)

Photo 5: Rabbitbrush/Grass (Previously Disturbed)

Photo 6: Rabbitbrush/Grass (Previously Disturbed)

Photo 7: Rabbitbrush/Grass (Previously Disturbed)

Photo 8: Rabbitbrush/Grass (Previously Disturbed)

Exhibit 8

Fish and Wildlife Information

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Wildlife Resources

JAMES F. KARPOWITZ
Division Director

August 13, 2007

Ben Grimes
Hansen, Allen & Luce Engineers
23 S. Carbon Avenue, Suite 21
Price, Utah 84501

Subject: Species of Concern Near the Proposed Coal Mine in Carbon County

Dear Ben Grimes:

I am writing in response to your email dated August 9, 2007 regarding information on species of special concern proximal to the proposed coal mine in Carbon County, Utah (Sections 26-35 of Township 12 South, Range 7 East, and Sections 2-6 of Township 13 South, Range 7 East, SLB&M).

The Utah Division of Wildlife Resources (UDWR) has records of occurrence for sandhill crane and bald eagle within the project area noted above. In addition, in the vicinity there are records of occurrence for northern flying squirrel and northern river otter.

The information provided in this letter is based on data existing in the Utah Division of Wildlife Resources' central database at the time of the request. It should not be regarded as a final statement on the occurrence of any species on or near the designated site, nor should it be considered a substitute for on-the-ground biological surveys. Moreover, because the Utah Division of Wildlife Resources' central database is continually updated, and because data requests are evaluated for the specific type of proposed action, any given response is only appropriate for its respective request.

In addition to the information you requested, other significant wildlife values might also be present on the designated site. Please contact UDWR's habitat manager for the southeastern region, Chris Wood, at (435) 636-0279 if you have any questions.

Please contact our office at (801) 538-4759 if you require further assistance.

Sincerely,

Sarah Lindsey

Sarah Lindsey
Information Manager
Utah Natural Heritage Program

cc: Chris Wood, SERO

1594 W. North Temple, Suite 2110, PO Box 146301, Salt Lake City, UT 84114-6301
telephone (801) 538-4700 • facsimile (801) 538-4709 • TTY (801) 538-7458 • *www.wildlife.utah.gov*

UTAH DNR
WILDLIFE RESOURCES

Ben Grimes

From: "Ben Grimes" <halengpr@emerytelcom.net>
To: "Sarah Lindsey" <sarahlindsey@utah.gov>
Sent: Monday, August 13, 2007 12:21 PM
Subject: Re: Information Request

Thank you for the letter.

As I indicated in my first email, I need a (complete) list of mammals, birds, amphibians, snakes and fish that occur in the area, not just species of special interest. I have to provide these lists in the permit application to the Utah Division of Oil, Gas and Mining. Chris Wood told me you would be to provide me with this information.

If you have any questions please call me at (435) 650-7075.

Thank You,
Ben Grimes

----- Original Message -----
From: "Sarah Lindsey" <sarahlindsey@utah.gov>
To: "Ben Grimes" <halengpr@emerytelcom.net>
Cc: "Chris Wood" <CHRISWOOD@utah.gov>
Sent: Monday, August 13, 2007 10:29 AM
Subject: Re: Information Request

Mr. Grimes,

Attached is a letter in response to your request. Please contact me if you have any questions.

Sincerely,
Sarah Lindsey

Utah Natural Heritage Program
Division of Wildlife Resources
1594 West North Temple
Salt Lake City, UT 84114-6301
(801) 538-4759

>>> "Ben Grimes" <halengpr@emerytelcom.net> 8/9/2007 4:12 PM >>>
I am working on a permit application for a new coal mine in Carbon County and I need to include the following:

1. Species lists for mammals, birds, amphibians, snakes, and fish
2. Threatened and Endangered species

The attached PDF shows the area I need information for --- the large area

inside the biggest black box.

If you have any questions please call me at (435) 650-7075.

Thank you,
Ben Grimes, Office Manager
HANSEN, ALLEN & LUCE ENGINEERS
PRICE, UAH

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.476 / Virus Database: 269.11.17/951 - Release Date: 8/13/2007
10:15 AM

Ben Grimes

From: "Lenora Sullivan" <lenorasullivan@utah.gov>
To: <halengpr@emerytelcom.net>
Cc: "Chris Colt" <CHRISCOLT@utah.gov>
Sent: Monday, March 20, 2006 10:12 AM
Subject: Re: T&E Species Request

Dear Mr.Grimes:

I am writing in response to your email dated March 9, 2006 for information regarding species of special concern proximal to a coal mine project located in Carbon County, Utah [T012S 007E S27-29, 32-34; T013S 007E S3-5 SLB&M].

The Utah Division of Wildlife Resources (UDWR) does not have records of occurrence for any threatened, endangered, or sensitive species within the project boundaries. However, in the vicinity of the project, there are recent records of occurrence for winter roosting habitat for bald eagle, a federally-listed threatened bird, which is included on the Utah Sensitive Species List.

The information provided in this letter is based on data existing in the Utah Division of Wildlife Resources' central database at the time of the request. It should not be regarded as a final statement on the occurrence of any species on or near the designated site, nor should it be considered a substitute for on-the-ground biological surveys. Moreover, because the Utah Division of Wildlife Resources' central database is continually updated, and because data requests are evaluated for the specific type of proposed action, any given response is only appropriate for its respective request.

In addition to the information you requested, other significant wildlife values might also be present on the designated site. Please contact UDWR's habitat manager for the southeastern region, Chris Colt, at (435) 636-0279 if you have any questions.

Please contact our office at (801) 538-4759 if you require further assistance.

Sincerely,

Lenora B. Sullivan
Information Manager
Utah Natural Heritage Program

cc: Chris Colt, SERO

>>> <halengpr@emerytelcom.net> 03/09/2006 1:36 PM >>>
We are working on a coal mine permit application with the Utah Div of Oil, Gas and Mining and need consultation on T&E species for the proposed Kinney No 2 Mine area. The area is in Carbon County. The attached PDF map shows the area of interest.

Would you please review your records and indicate if there have been any T&E species identified within the area marked on the map.

Please reply to my email address, and by hard copy.

If you have any questions please call Ben Grimes at (435) 650-7075.

Thank
[redacted]u.

This message was sent using Endymion MailMan.
http://www.endymion.com/products/mailman/

Ben Grimes

From: "Ben Grimes" <halengpr@emerytelcom.net>
To: <sarahlindsey@utah.gov>
Sent: Thursday, August 09, 2007 4:12 PM
Attach: List MapRequest_0001.pdf
Subject: Information Request

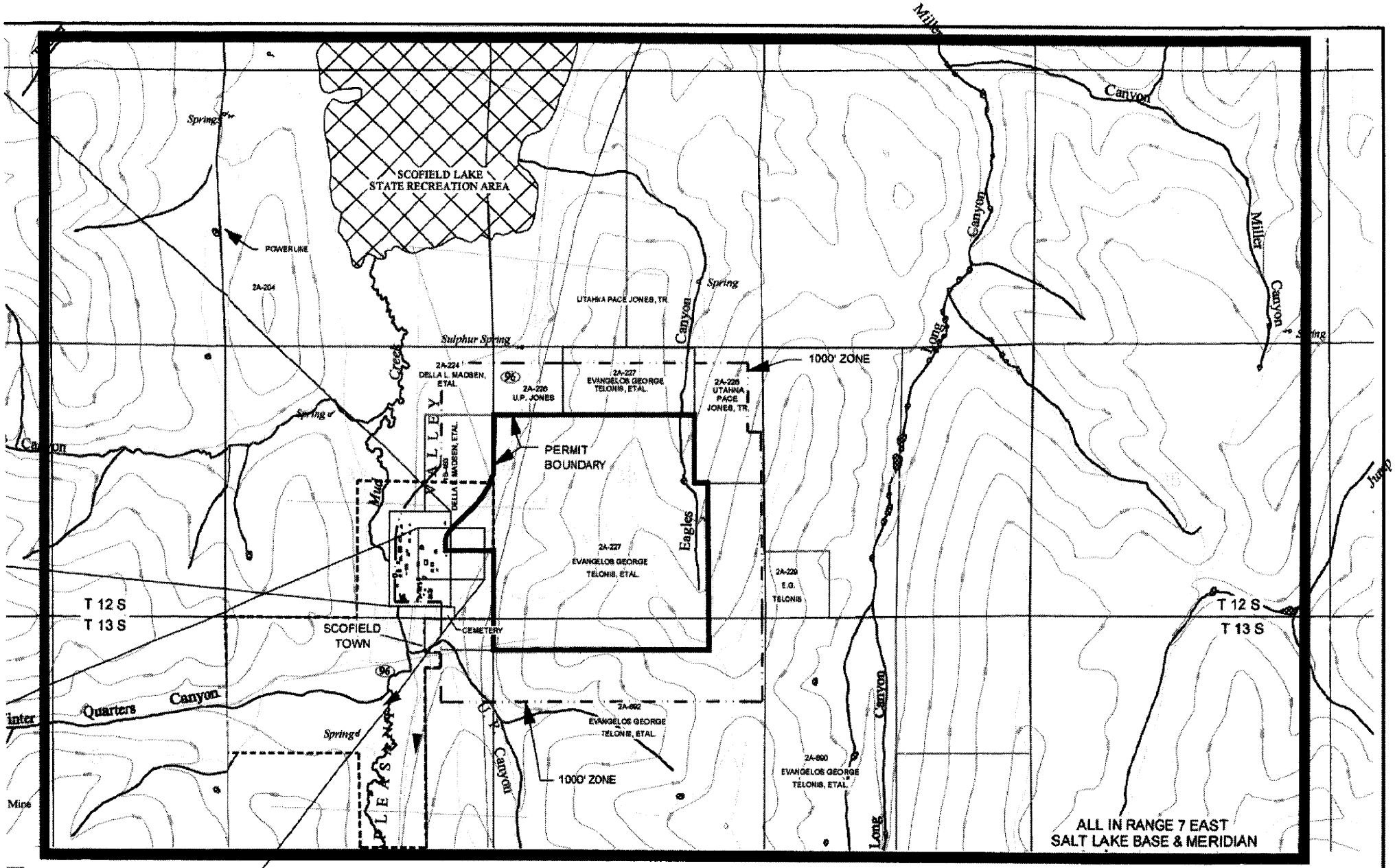
I am working on a permit application for a new coal mine in Carbon County and I need to include the following:

1. Species lists for mammals, birds, amphibians, snakes, and fish
2. Threatened and Endangered species

The attached PDF shows the area I need information for — the large area inside the biggest black box.

If you have any questions please call me at (435) 650-7075.

Thank you,
Ben Grimes, Office Manager
HANSEN, ALLEN & LUCE ENGINEERS
PRICE, UAH



NEED SPECIES LISTS -MAMMALS, BIRDS, AMPHIBIANS, SNAKES ETC
AND T & E SPECIES FOR THIS AREA

Exhibit 8

Nest #1541 Deterrent Mitigation Plan

Nest #1541 Mitigation Plan
Kinney No. 2 Mine

Preface

A condition of receiving approval to conduct nesting deterrent actions at raptor nest #1541 is to mitigate. A few mitigation plans were discussed by the U.S. Fish and Wildlife Service, Utah Division of Wildlife Resources, Utah Division of Oil, Gas and Mining, and Carbon Resources representatives. These plans included Purple martin nesting boxes, Sage grouse lek enhancements, purchasing non-lead bullets or shells to help prevent raptor poisoning from lead bullets, and assisting a raptor rehabilitation specialist with costs. During a meeting with Joe Helfrich of the UDOGM and Leroy Mead of the UDWR on June22, 2011 two of these alternatives were discussed along with an alternative of constructing Osprey nesting platforms. Considering the three alternatives discussed (Purple martin nest boxes, Osprey nesting platforms, and non-lead bullets/shells) it was decided that a proposal to mitigate using one or more of these alternatives would be proposed as a mitigation plan.

Carbon Resources has committed to and received approval for a total of $3,000.00 for mitigation efforts. The final mitigation may include one or more of the alternatives discussed and presented here. Details presented to follow provide the basis for preparing cost estimates for each alternative. From the cost estimates, the agencies and Carbon Resources will select the alternative or alternatives to be constructed based on getting the most benefit from the money.

Mitigation Plan

Alternative 1 –

Install Purple martin nest boxes at the mine site and/or at other Scofield area locations. The other locations that we have considered are at Scofield Town property (town park, and cemetery); at the Utah State Park at Scofield Reservoir (two possible locations), and at private property locations in the Scofield area. This last option would be completed by offering nesting boxes to local residents and placing them on their private property.

Carbon Resources commits to installing as many nesting boxes at the Kinney No. 2 Mine site as recommended by the UDOGM, UDWR, and the U.S. Fish and Wildlife Service. In addition Carbon Resources will coordinate with the UDOGM, UDWR and the U.S. Fish and Wildlife Service in finding other locations mentioned above. We believe that approval from Scofield Town will be possible since the town residents are very excited to see the mine operations start, and have been very cooperative. We also believe that locations at the Utah State Park at Scofield may be a good alternative and are hopeful the Utah State Park Authorities will concur.

Number of nest boxes

Commercially manufactured next boxes are available for reasonable prices. (Refer to the materials accompanying this proposal at the end of the plan). One such nesting box is manufactured by S&K Manufacturing that markets them as kits including everything needed for a complete installation. Their Combo American Barn - 12 Family Purple Martin Barn provides 12 ea. 6" x 9" compartments, mounted on a 12 foot tall pole. The compartments come with Starling proof openings, as well as perches. The pole comes with a pulley system for easy lowering of the barn for maintenance. The price of this model is $130.00, therefore approximately 11 kits could be purchased with the $3,000.00 commitment by Carbon Resources assuming an installation cost of $130 each (11 x $130.00/kit +$130.00 X 11/installation). The number of nesting boxes may vary by manufacturer dictating the final number of

boxes installed. Other nest boxes are also available. The final choice of nest boxes will be coordinated with the agencies involved.

Installation and maintenance

Carbon Resources will install and maintain the boxes for 10 years, except those boxes private property owners choose to receive and maintaine on their own . Installation will be by manufacturers' and UDWR and UDOGM recommendations. If installed before Kinney # 2 site construction, they will be installed in areas that will not be used for mine facilities. Locations for the installations will be coordinated with the agencies mentioned above. Maintenance will also be done according to manufacturers' or Purple martin experts recommendations, or agencies recommendations. Several resources for Purple martin information has been found on the internet, copies of which are attached to this plan. (Refer to the materials at the end of this proposal for details on maintenance and Purple martin issues).

As discussed abovethe option of having Scofield Town residents maintain nesting boxes at their property was also discussed and is a viable alternative. Carbon Resources will work with the agencies in accomplishing this alternative if it is chosen.

Alternative 2

Install Osprey nesting platforms in the Scofield area. Since Ospreys feed exclusively on fish it is assumed that the locations will need to be near Scofield Reservoir. Locations for the platforms will be selected by UDOGM and UDWR, with input from the U.S. Fish and Wildlife Service. The Utah State Park locations at Scofield Reservoir may be locations that are favorable, or other sites on private property can be pursued. The number of nest platforms constructed will depend ultimately on which alternative/s are chosen that can be constructed within the budget.

Design details and information on Osprey nesting platforms is included at the end of this proposal. A plethora of information is available on the internet; only a small portion of which is included with this proposal. Construction of the platforms is straight forward and can be accomplished by any reasonably qualified carpenter. Installation of the pole will be the biggest challenge, and will be accomplished by any necessary means depending on the locations chosen.

Alternative 3

Purchase and make available for sportsman's use non-lead bullets and or shotgun shells. Non-lead ammunition is becoming desireable and even required in some cases to help prevent lead poisoning of raptors from eating contaminated dead animals and birds. This ammunition will be made available by any reasonable means including having it available at the Snack and Pack convenience store in Scofield, or by other methods recommended by the UDWR and UDOGM. Carbon Resources has discussed this alternative with the owner (Jim Levanger) of the Snack and Pack store, who graciously volunteered to cooperate with the program. Jim recognizes the benefits of non-lead ammunition and also believes this program would be a good merchandising tool for his store.

Summary

Carbon Resources is excited about this mitigation opportunity and looks forward to working with the agencies to accomplish the plan. We commit to completing the mitigation plan during the 2011 construction season (normally by the end of October), or in a time frame determined and approved by the agencies.

Alternative 1

Purple martin nesting boxes

How to Succeed as a Purple Martin Landlord

The first time that purple martins sailed in and flew around my gourds on a pole, I was amazed at their musical and entertaining chatter. It seemed to embody happiness.

If you live in North America east of the Rockies, purple martins probably nest somewhere fairly nearby. And if you fulfill their needs, you have a good chance of purple martins moving in to the housing you provide.

For those of us who are just starting out with purple martins, there is a certain amount of anxiety as we eagerly await the first pair of martins to accept our housing and begin their nest.

Because that's the name of the game. Getting the first purple martins to move in. Until that happens, we're just *wannabe landlords.*

© Chuck Abare

Once a pair of purple martins accept our housing and raises a family in it, our colony is on its way.

The next year, the same birds will return. By that time the males will be in their glossy blue-black plumage, and they will look handsome as they perch on their houses. The photo at left, of an adult male at left, was taken by Chuck Abare, whose website has loads of information about purple martins. (Click the picture for a larger version of it.)

The second year, your first tenants' offspring may return with them as well. The young males will look mottled, as shown in Chuck Abare's picture at left. (Click the picture for a larger version of it.) With proper care, the colony will grow larger year by year.

Location is crucial for purple martins. Their houses need to be in an open area so they can sail straight into the houses from at least two directions. Put their house in the middle of your biggest open area.

They don't want to maneuver through trees or dodge telephone wires. No trees taller than the height of the martin house should be within 60 feet of the colony.

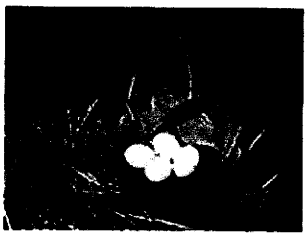
Where they can see you

The purple martin house should be close to your own home. Purple martins want to see people near their nests. (They know that human activity offers them protection against predators. Here's how it might have started, long ago.)

Near water

The birds will fly a couple of miles to water if necessary, but they prefer to nest within a half mile of a lake or other water. I know people in my small town of Fairfield, Iowa, who got martins even though there was no water in sight. But the town reservoir was only half a mile away.

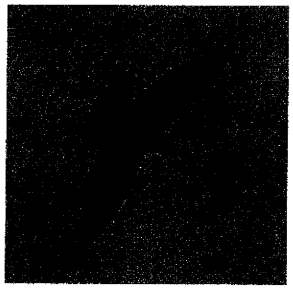
Roomy rooms



© Chuck Abare

Each purple martin compartment should be at least 6" x 6" x 12". Some martin houses are sold that are only 6" x 6" x 6". Research shows that this is too small for purple martins to lay a full clutch of eggs (up to 7) and raise the young. You can find martin houses for sale that are only 6" x 6" x 6", but we do not recommend them. The SuperGourds are ideal.

Good management



Don't buy a purple martin house if it doesn't provide for you open it up to clean out the compartments. You need to be able to get in there and make sure there are no house sparrows or starlings nesting inside.

All good purple martin houses allow access to the landlord!

Don't be intimidated by the task of examining the nests. The purple martins won't mind in the least. Remember, they *like* people. And they will have greater nesting success if we do our job. Besides, it just about the most

And let your colony LOOK convincing, too!

You may not be fooling the purple martins into thinking that live birds are inhabiting your colony, but a couple of purple martin decoys sure do get their attention.

They're plastic and practically indestructible. Mine have held up to two years of being outside, and they look as good as new.

It's kind of cheery having them up on the houses during the winter, when the purple martins are gone. Several people have asked me what kind of birds those are.

Deluxe Gourd Rack

One of the best-designed martin housing systems is the

fun thing in the world to look into the martin nest and see the baby birds inside.

Safe from enemies

A purple martin's worst enemies are two aggressive, non-native birds that have been introduced into North America — the house sparrow (below, left) and the starling (below, right).

Both covet purple martin houses and will take them over if the landlords let them. If the martin house is to succeed, the landlord must check the house every few days (or even daily in some cases) and remove any starlings or sparrows who try to build there.

And for protection from cats, raccoons, and snakes, a purple martin house requires a predator guard around the pole near its bottom. (You can see a predator guard around the pole in the photo up in the middle of the page.)

How it all began
SuperGourds - the best housing for purple martins
Deluxe Gourd Rack
The Pole and Winch
The Alamo martin house
When to Put up Purple Martin Housing

Copyright 2008 Diane Porter
Flying purple martin photos © 2007 Michael & Diane Porter

birdwatching.com

More Birding Tips

Deluxe Gourd Rack, shown above.

This system utilizes a pulley system that is easy to use. It lets you lower the houses for inspection.

Purple martins don't mind having you look into their houses. This is one bird that seems to know that we are its friends!

And if you want to see the birds up close...

Everyone interested in wild birds deserves her or his own binoculars.

Watch the action at your purple martin house as if you were standing 8 times as close.

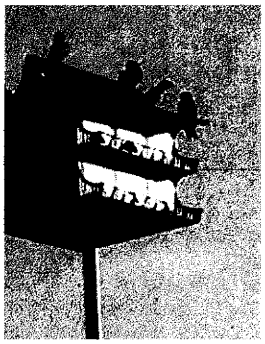
A good binocular for getting started shouldn't be expensive, but it must have good optical quality.

Our favorite starter binocular is the Eagle Optics Triumph 8x25.

The Best Purple Martin Houses and Gourds

Information about the Best Purple Martin Houses and Purple Martin Gourds brought to you by

S&K Manufacturing, Inc. 1001 Liberty Industrial Dr. O'Fallon MO 63367 1-800-764-8688



urple Martins Accommodations by S&K MFG, Inc.

Purple Martin Fledgling

Adult Purple Martins

For the Do-It-YourSelfer,

S&K Manufacturing has ***Free Purple Martin House Plans*** at feel free to visit and let us know how they work for you. Thanks and Take Care of Your Martins.

History | Locating Housing | Martin Enemies | Keeping Colony | Final Thoughts | S&K Purple Martin Houses / Gourds/ Racks & Misc. | Links of Interest

You and many others today share your love of the martin with many past generations of people who have lived on this continent. S&K Manufacturing has the latest in technology and innovation in purple martin housing, we want to improve your chances of attracting this magnificent bird, with some background on purple martins and their present day requirements.

HISTORY

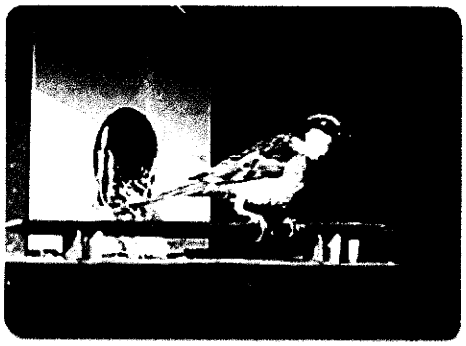
The purple martin's association with man goes back many years to the days when Native Americans hung gourds out for them. People later started erecting wooden, multi-compartment units in hopes of attracting this wonderful bird, and eventually martin houses made of other materials and plastic gourds began to be manufactured. Over the years martins in the entire section of the United States east of the Rocky Mountains have become totally dependent on man for nesting sites. Since the fate of these beautiful birds is now in our hands, it is extremely important that we provide adequate housing in which they can raise their young, and also that we can properly manage it.

LOCATING HOUSING

Often people with good intentions purchase a martin house or gourds, wanting to attract this bird, but they aren't adequately prepared to be responsible landlords. You should be aware of some facts to better your chances of being successful. One important piece of knowledge is that the martin has natural predators, such as owls, hawks, snakes, and raccoons; predator guards can be obtained for use on the housing to help prevent them from killing the martins. You should also erect your housing in the most open area available. Martins will not inhabit a house placed under a tree because of the threat of owls, hawks, and other possible predators. It is recommended that the housing be at least 40-60 feet from any trees taller than the housing. Martins feel a sense of protection being close to people, so place your housing close to human dwellings in a place that offers adequate open area with enough room and time for them to be able to flee when they see aerial predators.

PURPLE MARTINS' TWO WORST ENEMIES

European Starlings



English House Sparrow

Not only does the martin have these food-seeking predators to watch out for, it also has to contend with two enemies that aren't even out looking for a meal but are just trying to steal the nesting sites from the martins. The two birds that have been most detrimental to the existence of the martin are the European starling and the English house sparrow.

Unlike the purple martin, which is native to North America, both starlings and house sparrows are species that were introduced to North America. Some pairs of each were brought over to the United States from England in the late 1800's, and their numbers have increased dramatically ever since. At the same time the martin population, like that of other native cavity-nesting birds here, has drastically decreased. This is not a coincidence; the declining numbers of our native bird species are directly related to the population explosion of the European starling and the English house sparrow. Note: The English house "sparrow" is not really a sparrow at all; it's actually a weaver finch.

Each fall the purple martin migrates to South America and returns to the United States and Canada the following spring. Starlings and house sparrows, on the other hand, stay in their territory year-round. As if the arduous flight back from South America doesn't already take a big enough toll on the martins, upon their return in the spring, they often find that much of the existing housing has already been claimed by these two foreign species and are usually forced to try to find a nesting site elsewhere. Even if a martin pair does manage to find an empty cavity in which to raise a family and is fortunate enough to reach the egg-laying stage, the martins' efforts oftentimes end in failure because of the presence of their two bird enemies.

If starlings have already taken over a martin house, they will chase off any investigating martins. If martins are able to start nesting before any starlings show up at the colony, that doesn't mean that the starlings will leave the martins alone. When the martin pair is out foraging for insects, starlings will enter the cavity and destroy any eggs or nestlings found there. Upon their return, the martins will be chased off by the starlings. If a starling can trap an adult martin inside the compartment, the martin doesn't stand a chance against the sharp, powerful beak of its adversary. The starling will inflict mortal wounds on the martin. Once the starlings have the martins out of the way, they will proceed to build a nest, sometimes right on top of the eggs or young, and use the cavity to raise their own brood.

European starlings are deadly enemies of the purple martin, but English house sparrows can wreak their own havoc on a martin colony. They also investigate a martin colony intent on propagating their kind and will fill nesting compartments so full of nesting materials that martins will be unable to enter them. Very often the owner/landlord of a colony may see both martins and sparrows nesting in a martin house and be under the mistaken assumption that the two species are co-existing peacefully. Reality, though, is that the sparrows will go from compartment to compartment pecking holes in the eggs of the nesting martin pairs. This accomplishes the sparrows' goal, which is to prevent the martins from raising young, thereby reducing their future competition. Martins will abandon the colony after that, because it wouldn't be in their best interest to stay at a site where they had nest failure. Unfortunately, starlings and house sparrows don't limit their aggression solely to martins but direct it toward all of our other native cavity-nesting birds as well.

KEEPING YOUR COLONY

What can you as a martin landlord do to prevent this destruction from occurring at your martin colony? The key to getting and keeping a successful martin colony is to manage it properly. Since we at S&K Manufacturing, Inc. are concerned about the future of the purple martin, we have designed our new line of housing to help you successfully manage a martin colony. Our sturdy poles allow for lowering of the housing and therefore easy inspection to monitor the progress of each martin family and ensure that all is going well. The newly enlarged compartments in the house and larger size of the gourds promote better breeding success of the martins; they tend to raise more babies when provided with roomier nesting cavities.

In addition to the improvements already mentioned, another new feature is the crescent-shaped entrance holes that keep out virtually all starlings. In very rare instances, a starling that is smaller than normal might be able to enter the cavities; however, this is by far the exception. Although the entrance holes will prevent all or mostly all starlings from entering the cavities meant for martins, they will not deter house sparrows; this is because of the smaller size of these birds. A responsible martin colony manager, however, can and should be vigilant about keeping them out of the housing. No bird except purple martins should be allowed in the martin house/gourds. Martins, in all likelihood, will not nest in housing in which another species has already established its territory; the martins will be chased off by the other birds. If you notice any birds other than martins trying to lay claim to the housing, plug up the holes if you don't yet have martins and force the birds to go elsewhere. If they are native birds like Bluebirds and Tree Swallows, put up separate housing for them. But you should never allow house sparrows or starlings to get started building nests in houses or gourds that are much needed by the purple martin, whose population has dwindled in the past century. Law protects the purple martin, being native to this continent, but not the English house sparrow and European starling. It is perfectly legal to trap and/or shoot them. Most birding societies and wildlife federations promote these actions because starlings and house sparrows are taking a devastating toll on our native-cavity nesting birds. Most people just simply are not aware of what damage these two non-native species are doing to our native cavity-nesting birds and ecosystem.

A FINAL THOUGHT

As you can see by now, there is more to being a successful martin landlord than merely buying a house and/or gourds, putting them up and letting nature take its course. Your interest in Purple Martins already demonstrates your desire to attract purple martins. We have provided you with the latest in housing design and web site links to help you accomplish your goal of having a healthy and thriving purple martin colony that will last for years. It is our recommendation that your next step be to use available resources such as the internet or recent editions of books on this bird. Knowledge goes a long way toward attracting purple martins and having them return to your location year after year. Reading about them and sharing your hobby with others will tremendously help the purple martin in its fight for survival. Our best wishes in your endeavors, S&K Manufacturing, Inc.

This information is brought to you by S&K Manufacturing

DEPARTMENTS

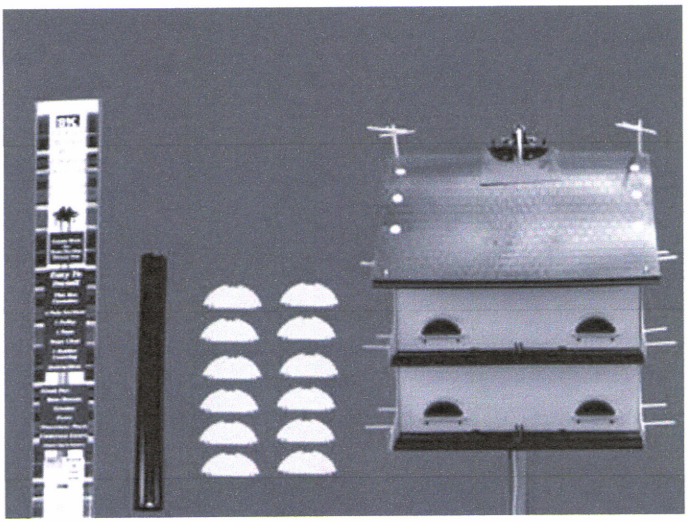
- Combination Specials
- Purple Martin Houses
- Purple Martin Gourds
- Poles
- Pole Accessories & Adapters
- Purple Martin Gourd Racks
- Accessories for Purple Martin Gourds & Houses
- Flag Poles
- Blue Bird / Tree Swallow Houses
- Purple Martin Decoys
- Purple Martin Gifts / Stickers
- Bird Feeders
- Bat House
- Gift Certificates
- PYP Products
- Dave's Corner

ACCOUNT INFO

- VIEW BASKET
- ACCOUNT INFO
- REQUEST CATALOG
- ADDRESS BOOK

Home > Combination Specials

Combo American Barn - 12 Family Purple Martin Barn



Item Number: CAB

Unit Price: $129.95

Quantity 1

BUY NOW

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Detailed Description

This is a great way to get started! This Combo pack comes with everything you need.

FREE SHIPPING on this Combination Special

S&K Manufacturing, Inc Purple Martin Houses are constructed of 100% UV Protected Injected Molded Polypropylene Copolymer Plastic.

CAB Includes the following:

*** 12 Family Purple Martin American Barn (AB)**

-- 12 Large compartments 6"x 9"
- Entry Doors are Starling Resistant
- The AB is EXPANDABLE to include multiple floors by adding additional houses.

*** 12 foot 1.9" Round Pole (RP19)**

The RP19 is a 12 foot 1.9 inch O.D. Steel Pole which brings strength and durability to a line of New S&K Products for the 2009-2010 season. The RP19 is a Rope and Pulley system but can add an optional winch to the pole.

*** Perch Kit (PK)**

Perches that snap on the side walls of your house for the Martins to perch, also includes 2 antennas to snap into the roof.

* Crescent Door Plug Set (SG12)

Crescent door plugs are used on the entrances of the 12 Family Martin House to prevent unwanted guests.

* Plastic Ground Sleeve (GS19)

The Sleeve enables you to remove your pole from the ground for maintenance or to Move your Quad-Tel Pole to a new location with ease! Install the Ground Sleeve wherever you may want your pole!

* House Snaps Together
No Tools Required
* Lifetime Warranty on the House

How To Assemble Video of AB Assembly
How To Assemble Video of RP19
video coming soon
How To Assemble Video of GS19
video coming soon
How To Assemble Video of PK
video coming soon
How To Assemble Video of SG12
video coming soon

Poles and adapters sold separately
Purple Martins Not Included

Free Shipping on all Orders Over $64.99

Shipping & Handling	
Order Total	**S&H Charge**
$0.00 - $9.99	$5.50
$10.00 - $19.99	$8.50
$20.00 - $64.99	$15.00
$65.00 Or More	FREE SHIPPING

We Ship USPS, UPS, Yellow Freight, or Common Carrier, Whichever is Most Economical. Most Orders Received Within Five to Seven Working Days.

Information Pages on Our Products which include Additional Images and Descriptions are listed below

http://www.sk-mfg.com http://www.skmfg.us http://www.purplemartin.net
http://www.purplemartin.us http://www.finchfeeder.com http://www.tubefeeder.com

Free Websites

http://www.freepurplemartinhouseplans.com http://www.songbirdfamily.com
http://www.pmcca.org

See our Exciting New Division of S&K Manufacturing, Inc.

http://www.pictureyourpassion.us http://www.refurbwhiteboard.com
http://www.onlydecalsandstickers.com http://www.eclipsetees.com
http://www.littlesistersystem.com

last updated in the month of December 2009
Thank you for Visiting & Shopping , The S&K Web Design Group

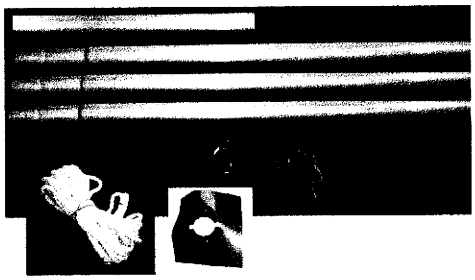
INSTRUCTIONS FOR INSTALLING YOUR NEW RP19 POLE

Revised 042011v1

WARNING: FOR YOUR SAFETY, DO NOT ERECT POLE NEAR ELECTRICAL WIRES IN THE AIR OR UNDER THE GROUND OR NEAR LARGE TREES.

ITEMS INCLUDED IN THIS PACKAGE:

- 3 - Swedge Pole Sections
- 1 - Top Pole Section
- 1 - 22-foot Nylon Rope
- 1 - Topper Pulley
- 1 - Pulley Wheel
- 1 - Nut & Bolt
- 1 - Rope Cleat
- 1 - Rain Guard
- 2 - Snaps



S&K Manufacturing, Inc.
1001 Liberty Industrial Dr.
O'Fallon, Missouri 63366
www.skmfg.com
1-800-764-8688

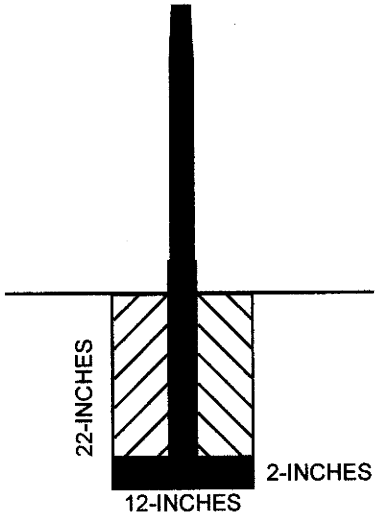
Expand your pole with additional pole sections. Pole sections can be purchased by calling S&K at 1-800-764-8688.

STEP 1:

Determine a site to assemble the pole. Keep pole away from power lines both above and below ground. Keep pole approximately 30 to 40-feet away from trees and other obstructions.

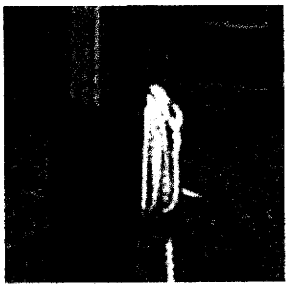
STEP 2:

After a safe location has been determined for raising your RP19 Pole, dig a hole approximately 22-inches deep and 12-inches in diameter. Create a 2-inch platform of concrete at the base of the hole. Let set for 1-hour. If using an S&K pole sleeve, place the pole sleeve in the center of the concrete platform and then insert one of the swedge pole sections into the pole sleeve. **MAKE SURE SWEDGE END OF POLE IS POINTING UP.** If no pole sleeve is being used, place one of the swedge pole sections in the middle of concrete platform and set plum. **MAKE SURE SWEDGE END OF POLE IS POINTING UP.** Using one bag of 80lbs Quik-Krete, mix properly by following the instructions on the concrete container. Pour concrete mix into the hole. DO NOT POUR CONCRETE IN CENTER OF POLE SLEEVE OR POLE. Make sure pole is perfectly vertical/plumb before concrete is left to set and dry. Let concrete set for 24 hours before proceeding to step 3.



STEP 3:

After the concrete has set for at least 24-hours, insert another swedge pole section onto the top of the section already plumb from step 2.



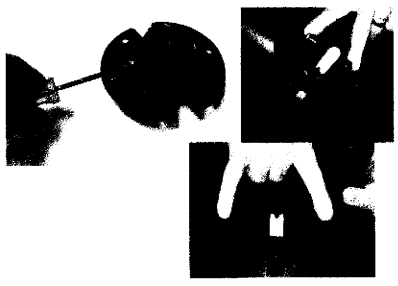
STEP 4:

Align the Rope Cleat to a comfortable position onto the pole section from step 3. Firmly secure the Rope Cleat using the provided self-tapping screws. Self-tapping screws can be inserted using an electric screwdriver.

STEP 5:

Assemble the pulley by pushing the provided screw through the topper and pulley wheel. Screw the bolt into the accompanying nut until bolt is firmly hand-tightened. Then run the provided rope through the pulley topper until the rope is centered on the pulley topper.

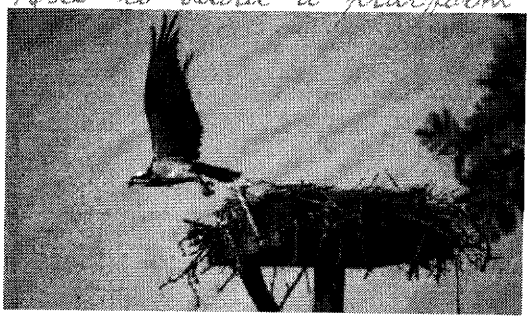
TIP: *If you are using an S&K Purple Martin House attach the included rain guard to the pulley topper by simply snapping it into place using the provided snaps. Line up the holes on the rain guard to the make sure the rope is able to slide through the rain guard's openings.*

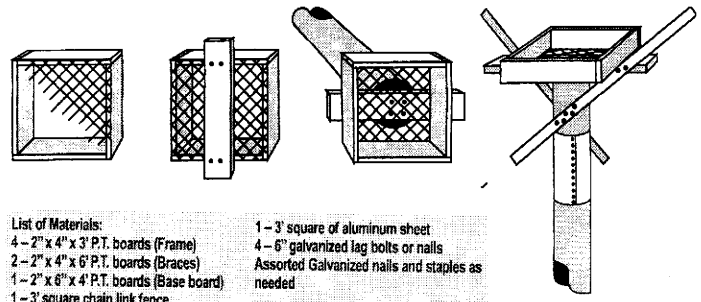


Alternative 2

Osprey nesting platforms

How to build a Platform

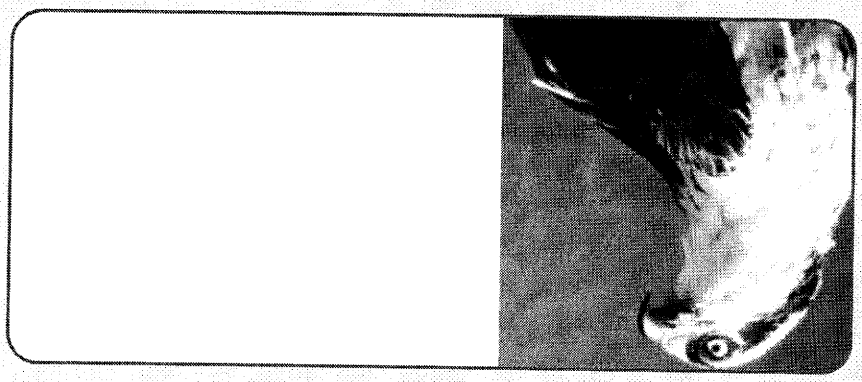




List of Materials:
4 – 2" x 4" x 3' P.T. boards (Frame)
2 – 2" x 4" x 6' P.T. boards (Braces)
1 – 2" x 6" x 4' P.T. boards (Base board)
1 – 3' square chain link fence
1 – 3' square of aluminum sheet
4 – 6" galvanized lag bolts or nails
Assorted Galvanized nails and staples as needed

STEP #1: Nail the four frame boards together.
STEP #2: Staple the chain link fence to the top of the platform frame.
STEP #3: Nail the base board across the middle of the platform frame.
STEP #4: Turn the entire platform over so that the base board is on the bottom. Mount the platform on the top of the pole using the 6-inch nails, before the pole is placed upright.
STEP #5: Mount the brace boards on opposite sides of the platform, with one end attached to the pole and the other end attached to the base board, extending a few feet above the platform.
STEP #6: Wrap the sheet of aluminum around the pole so that it will be at least 10 feet above ground level after the pole is planted. (This acts as a guard against raccoons climbing the pole into the nest.)
STEP #7: Install the pole at the chosen location. To help attract ospreys to the platform, place a few sticks (no longer than 3/4 inches in diameter and 18 inches long) within it.

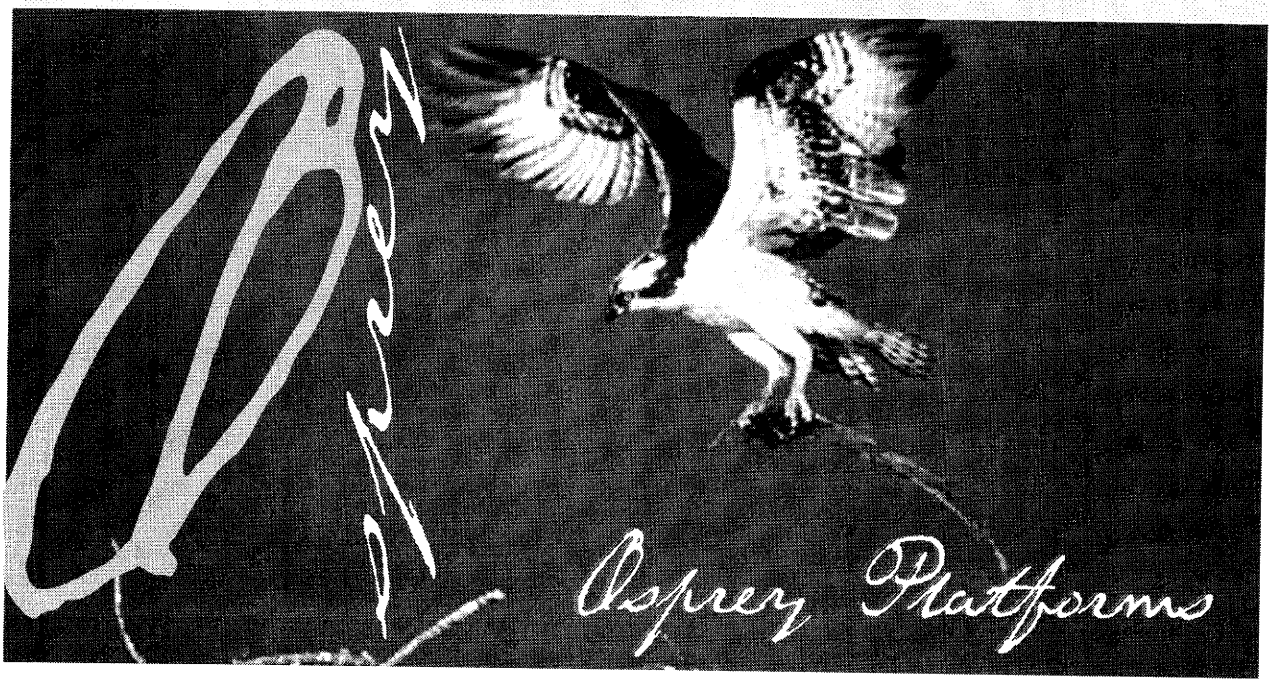
Disclaimer:
Neither Lee County, The International Osprey Foundation, LCEC, or their employees shall be held responsible for injuries incurred in the construction or installation of the platform or for the faulty construction or installation of platforms that may result in damage or injury. The installer assumes all risks in erection of structure.



LCEC
P.O. Box 3455, North Fort Myers, FL 33918
239-995-2121

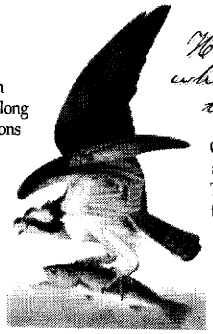
The International Osprey Foundation, Inc.
P.O. Box 250, Sanibel, FL 33957
239-472-5218

Prepared in cooperation by:
Lee County Division of Environmental Sciences
P.O. Box 398, Fort Myers, FL 33902
239-335-2477



What is an osprey?

The osprey (Pandion haliaetus) is a large, fish-eating hawk that is found on every continent of the world except Antarctica. They are generally found along the seacoasts, bays and large unfrozen rivers and lakes. Northern populations migrate to warmer climates in the winter. Around the world, the osprey population has suffered because of hunting, egg collecting, and the abuse of pesticides like DDT which can weaken egg shells. At one time considered a "threatened" species in this country, the osprey has made a comeback. In Florida, ospreys are currently designated as a Species of Special Concern in Monroe County and are protected by several state and federal laws. Because of its position at the top of the food chain, the osprey is considered to be an "indicator" species, whose health and success directly reflects the status of the overall coastal environment.



How will I know one when I see one?

Adults are almost eagle size, about 21 to 24 inches tall with a wingspan of 54 to 72 inches. They are dark brown, with a white underside and a mostly white head. Because of their size and dark brown body with a partially white head, ospreys are often mistaken for adult bald eagles. They can be distinguished by two main features – eagles don't have a white underside and they don't have an ospreys "mask", a dark brown streak that runs from the eyes across the cheeks to the sides of the neck. In flight, ospreys are easily distinguishable by the white underparts, the long wings with a conspicuous bend at the wrist, and barred brown and white tail and flight features.

In hunting for fish, its primary prey, the osprey hovers over the water and then dramatically dives in feet first. The bird then splashes up out of the water, pauses to shake the water from its feathers, and (if successful) carries the fish "torpedo-style" back to its perch or nest. To help in its quest for food, the osprey has developed a couple of unique physical features. The lower surface, or pads, of the toes are covered with rough spicules, while help it hold slippery fish. Also, it is the only hawk that has a reversible outer toe as in owls; this enables it to grasp its prey with to toes in front and two toes in the back.

How and where do they nest?

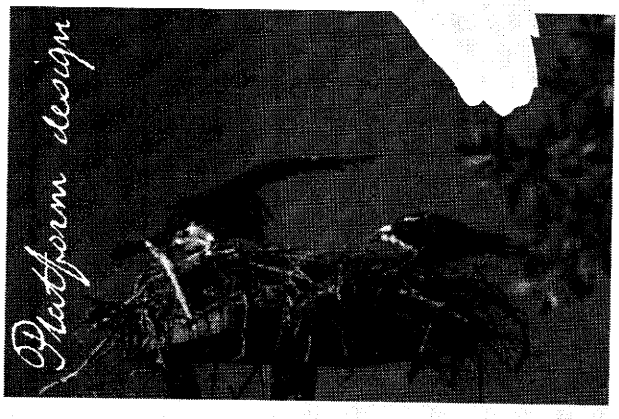
Osprey nest in Florida from about December to May. They mate for life and very territorial, with some pairs returning to the same nest for decades. The nests are built of sticks, but often include seaweed, bones, driftwood, and other material from marshes and sites not far from the water, with a tall snag relatively separated from surrounding growth. If the ospreys decided that the snag of dead tree (for example) looks promising, they will hover over it and drop sticks until they catch. More sticks will be added until they become intertwined.

The search for tall, semi-isolated sites has often led to ospreys nesting on man-made structures, including antennas, channel markers, chimneys, windmills and utility poles. In utilizing these structures, ospreys have demonstrated an ability to successfully interact in the presence of human activity. Of course, they also have created an occasional nuisance. To aid in the reestablishment of ospreys in many areas, and sometimes to keep them off man-made structures, nesting platforms have been erected. These platforms have proven to be beneficial, providing a stable base for nests and better nest survival.

How can I put up a platform?

If you are interested in establishing a nest platform for ospreys on your property, you must ask yourself one important question – "Am I willing to live with a large wild bird which may make noise, eats and discard fish, and make a mess from its nest or a nearby perch?" If that is acceptable to you, you must then ask whether your neighbors will mind. There's no point in creating a confrontational situation that may eventually lead to the harassment of these protected birds.

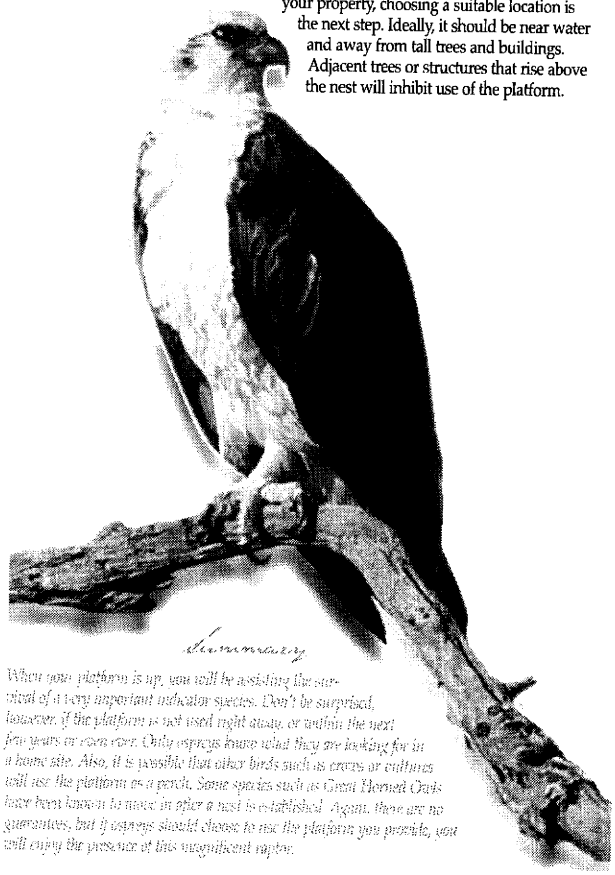
The next step in to determine if ospreys would be interested in nesting on your property. Remember, they prefer areas near water, so far inland areas may not be appropriate. On Sanibel Island which is a barrier island on the Gulf of Mexico, ospreys nests are found in the middle of the island and on the bay side. However, very few are located on the gulf side. If there are no ospreys currently nesting anywhere near your property that may be an indication that the site is undesirable. Even if ospreys currently nest nearby, a new platform may not be used. Ospreys are very territorial and the size of the territories varies greatly. Once you have decided that ospreys might nest on your property, choosing a suitable location is the next step. Ideally, it should be near water and away from tall trees and buildings. Adjacent trees or structures that rise above the nest will inhibit use of the platform.



Once a suitable location is determined, you will need to make arrangements to have a utility pole or something similar erected, preferably to a height of 30 to 40 feet. This is what the platform will sit upon. Utility companies often will sell and install old poles, for a price. In Lee County, those interested can contact Florida Power and Light Company or the Lee County Electric Cooperative (LCEC) It is also essential to contact your local city or county building department to find out if a building permit is required to erect a platform.

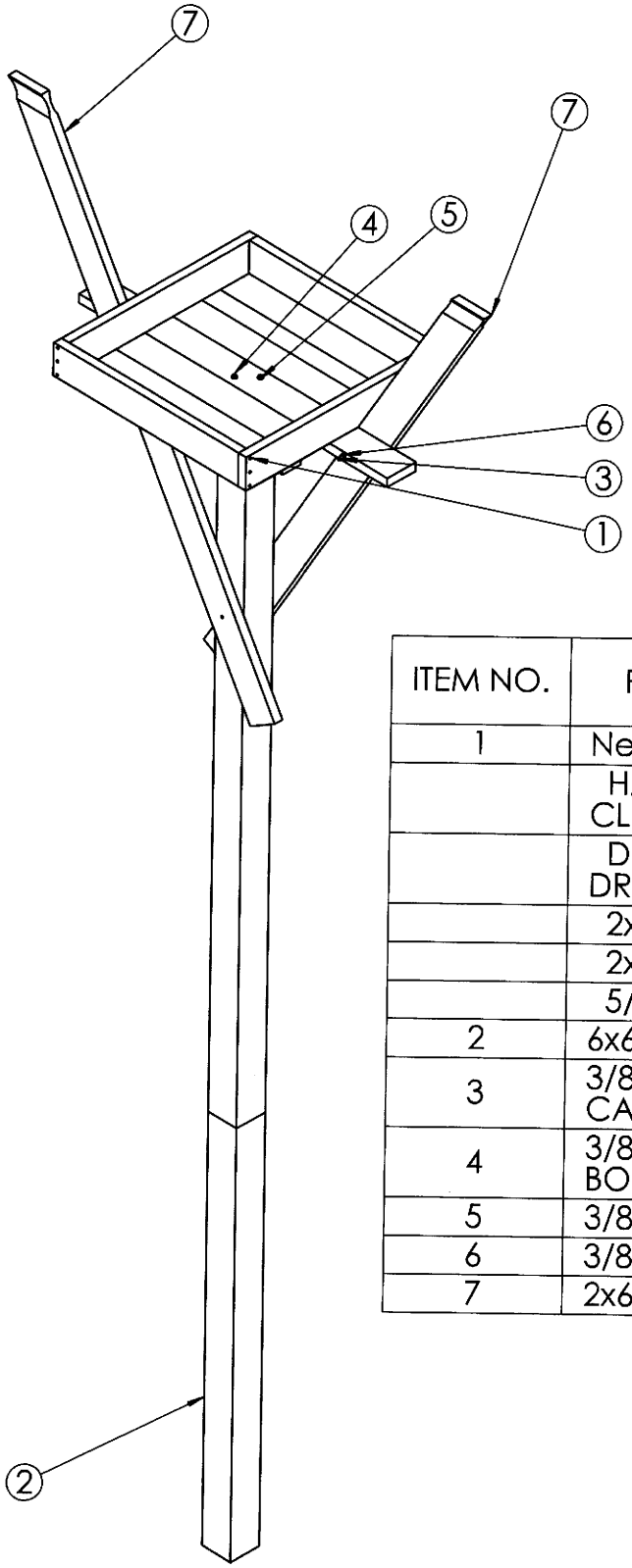
One suggested design for a platform to be mounted on a utility pole is included in this brochure. Variations in design or materials are certainly possible. Remember that this platform will be exposed to the elements, so all wood should be pressure treated, and the platform should be examined after a few years to determine its condition.

In addition to this design, particularly in areas that are not suitable to heavy equipment, a design known as the "Sanibel Tripod" can be used. Essentially, this is similar to a three-legged tepee that can be transported to a site and erected manually by four or five adults. For more information on this alternative design, or for membership information, please contact The International Osprey Foundation at P.O. Box 250, Sanibel, Florida 33957-0250.



Summary

When your platform is up, you will be assisting the survival of a very important indicator species. Don't be surprised, however, if the platform is not used right away, or within the next few years or even ever. Only ospreys know what they are looking for in a home site. Also, it is possible that other birds such as crows or vultures will use the platform as a perch. Some species such as Great Horned Owls have been known to move in after a nest is established. Again, there are no guarantees, but if ospreys should choose to use the platform you provide, you will enjoy the presence of this magnificent raptor.

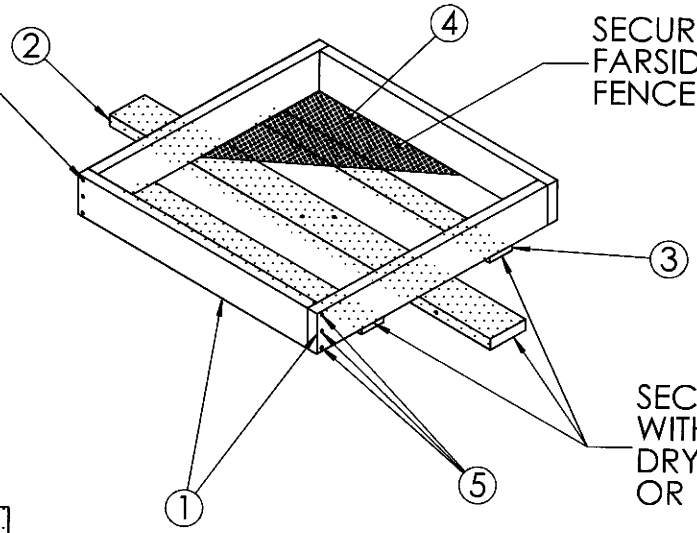


ITEM NO.	PART NUMBER	QTY.
1	Nest Box	1
	HARDWARE CLOTH	1
	DECK OR DRYWALL SCREWS	26
	2x6x36	4
	2x6x60	1
	5/4 X 6 RIPPED	2
2	6x6x16	1
3	3/8-16 X 8.0 CARRIAGE BOLT	2
4	3/8-16 X 6.0 LAG BOLT	2
5	3/8 FLAT WASHER	4
6	3/8-16 HEX NUT	2
7	2x6x96	2

CITIZENS UNITED TO PROTECT THE MAURICE RIVER AND IT'S TRIBUTARIES

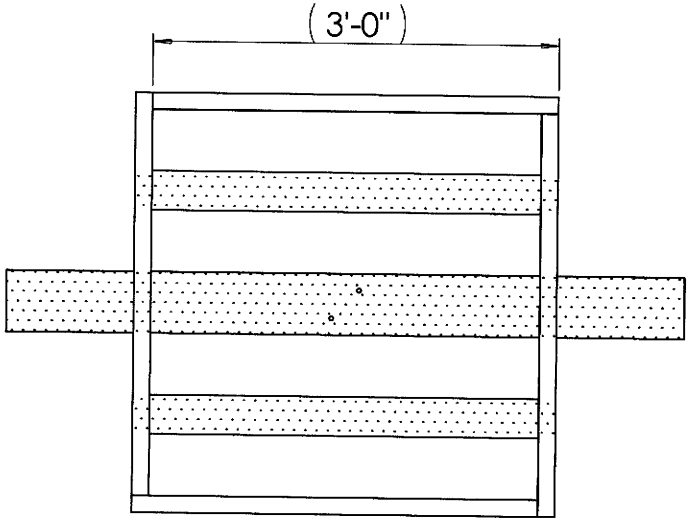
OSPREY'S NESTING PLATFORM

SECURE BOX FRAME BOARDS WITH #8 GALVANIZED DRYWALL OR DECK SCREWS OR 12P GALVANIZED NAILS

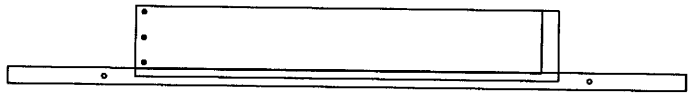


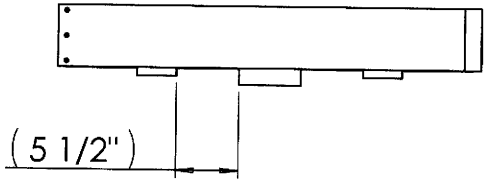
SECURE HARDWARE CLOTH FARSIDE WITH GALVANIZED FENCE STAPLES

SECURE BOTTOM BOARDS WITH #8 GALVANIZED DRYWALL OR DECK SCREWS OR 12P GALVANIZED NAILS



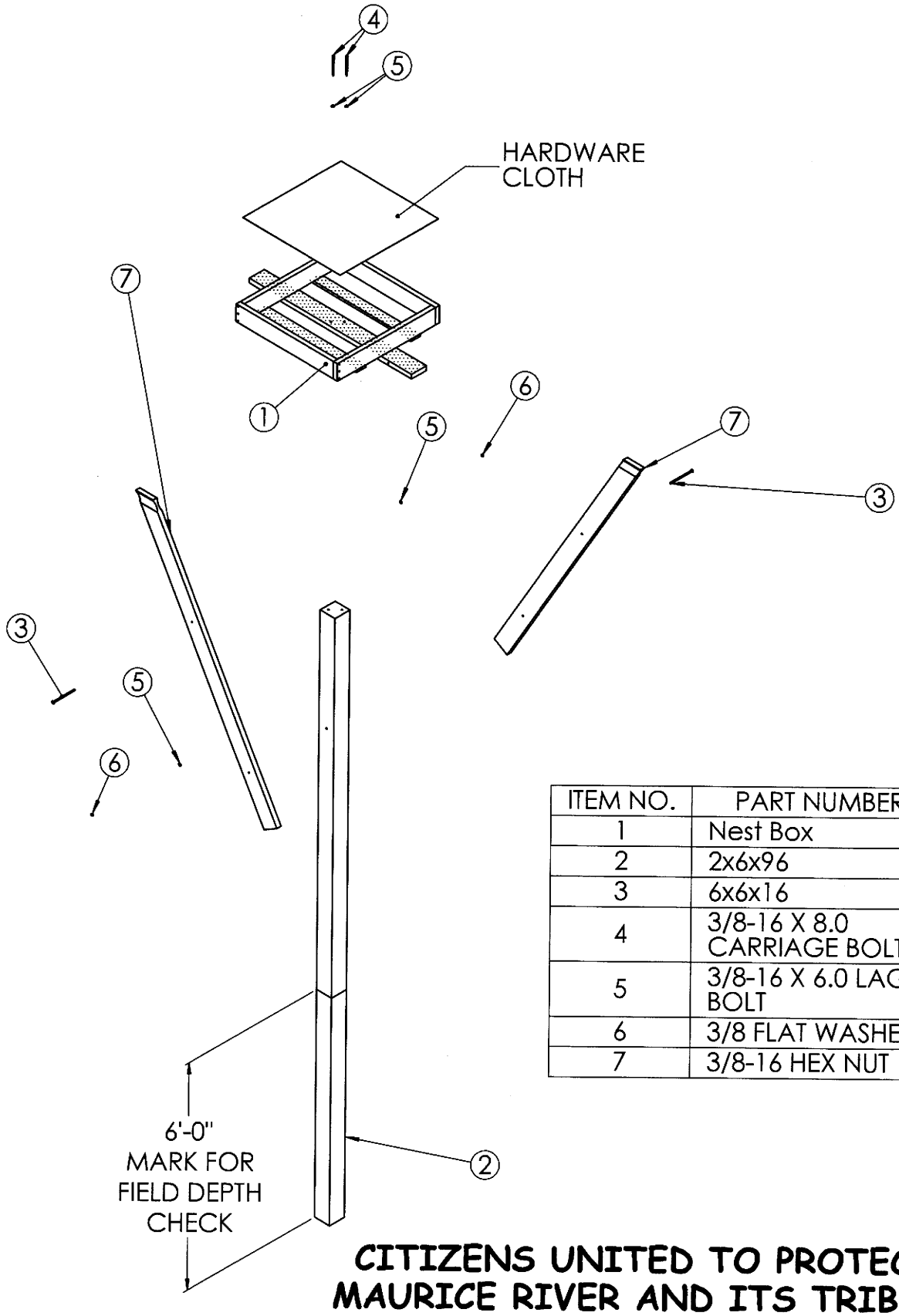
ITEM NO.	PART NUMBER	QTY.
1	2x6x36	4
2	2x6x60	1
3	5/4 X 6 RIPPED	2
4	HARDWARE CLOTH	1
5	DECK OR DRYWALL SCREWS	26





CITIZENS UNITED TO PROTECT THE MAURICE RIVER AND ITS TRIBUTARIES

OSPREYS NEST BOX DETAIL



ITEM NO.	PART NUMBER	QTY.
1	Nest Box	1
2	2x6x96	2
3	6x6x16	1
4	3/8-16 X 8.0 CARRIAGE BOLT	2
5	3/8-16 X 6.0 LAG BOLT	2
6	3/8 FLAT WASHER	4
7	3/8-16 HEX NUT	2

CITIZENS UNITED TO PROTECT THE MAURICE RIVER AND ITS TRIBUTARIES

OSPREYS NESTING PLATFORM ASSEMBLY DETAIL

Alternaive 3

Non-lead hunting amunition

Updated July 28, 2009

BLACK HILLS AMMUNITION, INC.
PO Box 3090
Rapid City, SD 57709-3090

Phone: 605-348-3090
Website: www.black-hills.com

Cartridge Designation	Caliber(s)	Grain(s)	% lead content by weight	Unique Identifying Characteristics
223 Remington**	.223	36	< 1%	Copper jacket, compressed powder core, open tip
223 Remington**	.223	55	< 1%	Copper jacket, compressed powder core, open tip with cannelure
223 Remington	.223	55	< 1%	Barnes TSX projectile; solid copper, open tip
22-250 Remington**	.223	36	< 1%	Copper jacket, compressed powder core, open tip
243 Winchester**	.243	62	< 1%	Copper jacket, compressed powder core, open tip
243 Winchester	.243	85	< 1%	Barnes TSX projectile; solid copper, open tip
25-06 Remington	.25	100	< 1%	Barnes TSX projectile; solid copper, open tip
270 Winchester	.277	130	< 1%	Barnes TSX projectile; solid copper, open tip
308 Winchester	.308	168	< 1%	Barnes TSX projectile; solid copper, open tip
30-06 Springfield	.308	180	< 1%	Barnes TSX projectile; solid copper, open tip
7 mm Remington Mag.	.284	140	< 1%	Barnes TSX projectile; solid copper, open tip
300 Winchester Mag.	.308	180	< 1%	Barnes TSX projectile; solid copper, open tip

** certified for use on appropriate non-game species only.

NON-LEAD AMMUNITION SOURCES

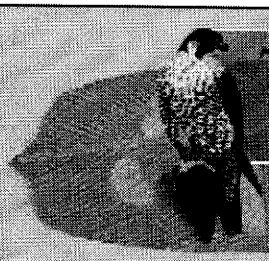
Brand Name	Caliber	Type	Wt.	Price
Black Hills Gold	25-06 Remington	Barnes X-bullet	100 gr.	$ 31.99
	270 Winchester	Barnes XLC	130 gr.	$ 31.99
	7mm Remington Magnum	Barnes X-bullet	140 gr.	$ 39.99
	308 Winchester	Barnes XLC	168 gr.	$ 28.99
	30-06 Springfield	Barnes XLC	180 gr.	$ 31.99
Federal Premium	30-06 Springfield	Barnes triple shock X	180 gr.	$ 29.89
	300 Win. Magnum	Barnes XLC	180 gr.	$ 38.49
	300 Win. Short Magnum	Barnes triple shock X	180 gr.	
	338 Win. Magnum	Barnes XLC	225 gr	$ 47.75
	7 mm Remington Magnum	Barnes triple shock X	160 gr.	$ 34.98
	7 mm Win. Short Magnum	Barnes triple shock X	160 gr	
	270 Winchester	Barnes triple shock X	130 gr.	$ 29.93
	270 Win. Short Magnum	Barnes triple shock X	130 gr.	
	308 Winchester	Barnes triple shock X	150 gr.	$ 30.15
	308 Winchester	Barnes XLC	150 gr	$ 30.15
	25-06 Remington	Barnes XLC	100 gr.	$ 28.49
PMC	270 Winchester	Barnes X-bullet	130 gr.	$ 17.47
	270 Winchester	Barnes X-bullet	150 gr.	$ 17.47
	30-06 Springfield	Barnes X-bullet	150 gr.	$ 17.77
	30-06 Springfield	Barnes X-bullet	165 gr.	$ 17.77
	30-06 Springfield	Barnes X-bullet	180 gr.	$ 17.77
	308 Winchester	Barnes X-bullet	150 gr.	$ 17.77
	7mm Remington Magnum	Barnes X-bullet	140 gr.	$ 21.18
	7mm Remington Magnum	Barnes X-bullet	160 gr.	$ 21.18
Weatherby Premium	240 Weatherby Magnum	Barnes X-bullet	90 gr.	$ 51.49
	257 Weatherby Magnum	Barnes X-bullet	115 gr.	$ 46.55
	270 Weatherby Magnum	Barnes X-bullet	140 gr.	$ 46.55
	300 Weatherby Magnum	Barnes X-bullet	180 gr.	$ 46.55
	7mm Weatherby Magnum	Barnes X-bullet	150 gr.	$ 46.55
Winchester Supreme	270 Winchester	Fail Safe Cartridges	140 gr.	$ 25.67
	300 Winchester Magnum	Fail Safe Cartridges	165 gr.	$ 32.98
	300 Winchester	Fail Safe Cartridges	150 gr.	$ 32.98
	308 Winchester	Fail Safe Cartridges	150 gr.	$ 25.67
	338 Winchester Magnum	Fail Safe Cartridges	230 gr.	$ 36.28
	7mm-08 Remington	Fail Safe Cartridges	140 gr.	$ 25.67
	7mm Remington	Fail Safe Cartridges	160 gr.	$ 29.51
	7mm Remington Magnum	Fail Safe Cartridges	140 gr.	$ 29.51
	7mm Winchester Short Magnum	Fail Safe Cartridges	160 gr.	$ 29.51
	7mm STW	Fail Safe Cartridges	160 gr.	$ 34.94

NOTE- When purchasing factory loaded ammunition, look for the letters XS, XLC or Barnes triple shock X after the size and caliber. For example, Federal Premium offers a non-toxic load for a .308 rifle, the 150 Grain XLS

Most of these prices were obtained from online Web sites and vary in price by approximately $5 in either direction.

Online Web sites to consider:

Natchez Shooter's Supply: http://www.natchezss.com
Midway USA: http://www.midwayusa.com
Cheaper than Dirt: http://www.cheaperthandirt.com
Barnes Bullets: http://www.barnesbullets.com
Cabelas: http://www.cabelas.com
Bass-Pro: http://www.basspro-shops.com
Outdoor Superstore: http://www.outdoorsuperstore.com
Wholesale Hunter: http://www.wholesalehunter.com



THE PEREGRINE FUND
WORLD CENTER FOR BIRDS OF PREY

Working to Conserve Birds of Prey in Nature

Ingestion of Lead from Spent Ammunition: Implications for Wildlife and Humans

Please read The Peregrine Fund's official position statement on lead ammunition (PDF file)

A Brief Summary of Lead

Lead is a poisonous metal present in a variety of commercial products, as a pollutant from industrial activities, and as an environmental contaminant in many urban and rural habitats throughout the world. When ingested or inhaled, the body "mistakes" lead for calcium and other beneficial metals, and thus transports lead into nerve cells and other vital tissues.

Mankind has long known about lead as an agent of sickness and death, but medical studies published in the last five to ten years are showing harmful effects at unexpectedly low levels of exposure. There are permanent adverse impacts upon cognitive function and growth in children with histories of blood levels averaging less than one-tenth of one microgram per gram—a level formerly considered benign.

Scientific evidence of the effects of lead on human health has brought forth large scale restrictions on its use in the United States, including the prohibition of lead in many gasolines and paints. Responses on behalf of wildlife have been less forthcoming, but consumption of lead shot by ducks and geese and secondary poisoning of Bald Eagles contributed to the 1991 ban on lead shot for waterfowl hunting in the United States. Other countries have instituted similar measures.

— *See the complete preface for references and citations*

Non-Lead Ammunition Resources

huntingwithnonlead.org

Article: History and success of non-lead bullets

Copper vs. lead bullet comparison videos (YouTube): Part 1 • Part 2 • Part 3

Bullet testing in ballistic gelatin and fragmentation barrel (YouTube)

Loading data, high-speed video and FAQs from Barnes Bullets

GMX gilding metal bullet information from Hornady

Remington press release for Copper Solid bullet

Sellier & Bellot press release for eXergy bullet (PDF)

Winchester press release for E-Tip cartridges

Sources of non-lead ammunition

- Barnes Bullets
- Black Hills Ammunition
- Conley Precision Cartridge
- Dynamic Research Technologies
- Estate Cartridge
- Federal Premium
- Fiocchi
- Hevi-Shot
- Hornady
- Kent Cartridge
- Knight Muzzleloaders
- Nosler
- PMC Ammunition
- PMP Ammunition
- Remington
- Safari Ammunition
- Sellier and Bellot
- Stars and Stripes Ammunition
- Weatherby
- Superior Ammunition
- Winchester

If you know of a source of non-lead ammunition that is not in

About the 2008 conference

Conference web site

Download the research papers or
Buy the book

the list above, please tell us so we can add it

Misc. lead information

USGS "Lead Poisoning in Wild Birds" (PDF)

Lead and Human Health Questions

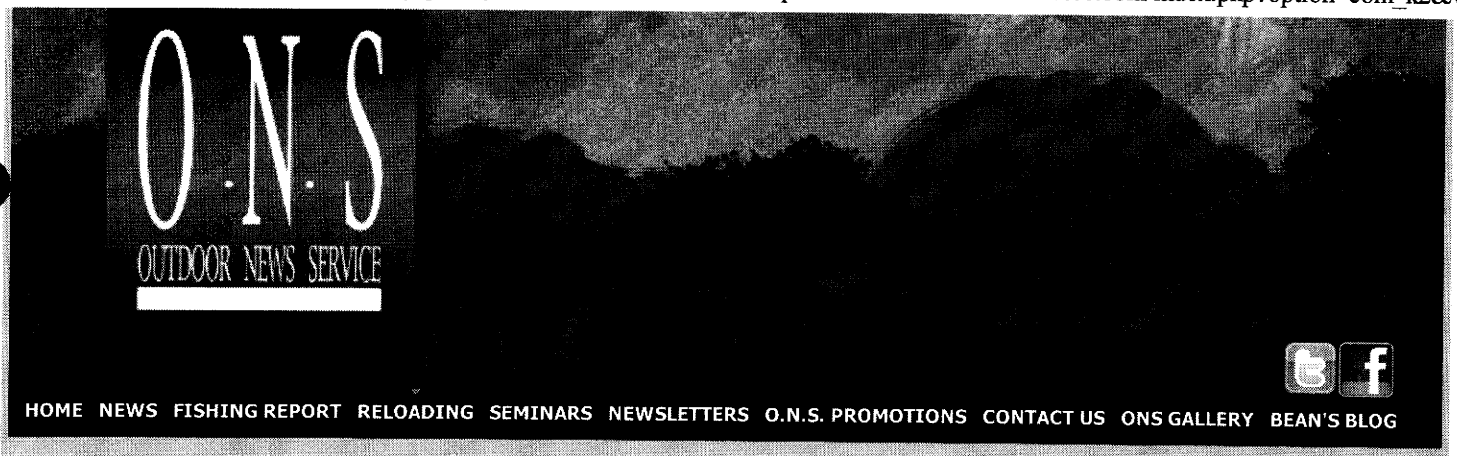
View the list of resources HERE.

Other links:

- 2010 information from Pinnacles National Park

5668 West Flying Hawk Lane · Boise Idaho · 83709
United States of America
Ph. 208-362-3716, Fax 208-362-2376
Interpretive Center 208-362-8687
E-mail: tpf@peregrinefund.org

Combined Federal Campaign #10639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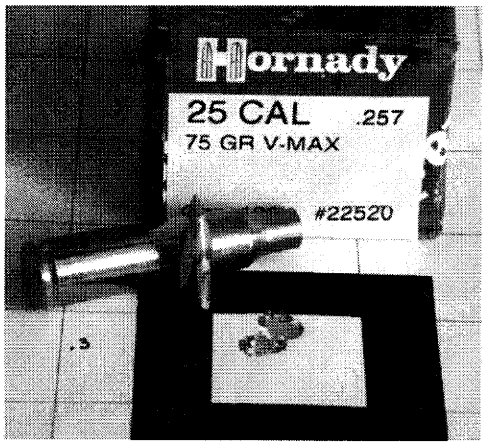
Sunday, 03 April 2011 01:13

NON-LEAD VARMINT BULLET LINES ARE GROWING QUICKLY

Print E-mail

Hunter demand for non-lead varmint bullets, mostly driven by the bans on lead slugs within the range of California condors here in California, has resulted in rapid growth in this bullet category. When the ban went into affect just a little over two years ago, there was really only one .224-inch varmint bullet available on the market – the 36-grain Barnes Varmint Grenade.



Today you can buy non-lead varmint bullets from Barnes, Nosler, and Hornady, and these highly frangible slugs are available in five of the most popular calibers -- .204, .224, .243, 277, and .308-inch diameters, cover most of the popular varmint calibers along with making AR-style rifle varmint hunters who are shooting .308 Winchesters or 6.8 SPCs happy, too.

Barnes has been making copper bullets long before California' lead ban in condor range, and their big game slugs developed a reputation as one of the best hunting bullets on the market, expanding reliably and penetrating deeply.

Jessica Brooks at Barnes said the Varmint Grenade was really an offshoot of a military project where the government wanted a bullet with a set of characteristics right in line with what California varmint hunters needed: lead free and very explosive. The bullet consists of a powdered metal (copper) core in a copper jacket. Because copper is lighter than lead, all non-lead bullets are lighter for equivalent bullet lengths and configurations, so they can be driven much faster. The .224-inch, 36-grain bullet can be pushed to 3,800 fps out of a .223 Remington and at around 4,500 fps out of a .22-250. Barnes now makes Grenades in a 26-grain, 20 caliber for the .204 Ruger, a 30-grain, 224-inch bullet designed for the .22 Hornet (but providing impressive results out of my .223), a 50-grain, .224-inch bullet, and a 62-grain, .243-inch slug. The MPG line utilizes the same technology as the Varmint Grenade and they make excellent varmint slugs, even thought they might have been designed with military and tactical uses in mind. They come in a 55-grain, .224-inch bullet, an 85-grain, .277-inch (6.8mm) bullet, and .308-inch bullets in 108 and 150 grains. I'm betting you can easily get 3,700 fps with that 85-grainer out of your .270 Winchester.

Description:
June 10, 2011 - Jen Wolf landed this Crowley Lake rainbow trout while fishing with Sierra Drifters guide Doug Dolan. The fish took Wolf into the backing before being landed and released.

Hornady is the newest entrant into the non-lead line of bullets, introducing its big game GMX bullets and its varmint NTX lines within the last two years. The company has also added its flexible-tip technology, allowing pointed bullets to be used in lever guns, with a new line of monolithic bullets in its MonoFlex line this year. Varmint hunters, however, are most interested in the .204-inch, 30 grain and .224-inch, 35-grain NTX bullets which have a polymer tip (like the popular Hornady V-Max).

"I think you can safely say you will start to see all of our copper lines expand," said Everett Deger of Hornady.

Nosler has also jumped into the non-lead market with both feet with its E-Tip lead free big game bullets three years ago and its Ballistic Tip Lead-Free varmint bullets came out in 2009. The varmint slugs are now available in 35-grain and 40-grain .224 bullets, a 32-grain, .204 bullet, and a 55-grain, .243 slug.

"They're selling nationally really well, and of course in California," said Justin Moore of Nosler about the new lead free varmint bullet. "It's pretty volatile. When it hits something, it's just gone."

Deger said the Hornady NTX varmint was designed to "expand rapidly and vaporize when impacting something more dense than air."

While they might be required in a large area of California, all the non-lead varmint bullets are gaining a reputation for their lethality on game. One engineer, after seeing the high speed footage of one of these slugs exploding into a burst of tiny pieces called the frements "the poppy seeds of death."

As with all bullets, some seem to shoot better in one rifle than another, but these non-lead varmint slugs are shooting at least as well as their leaded counterparts and with the growth of the product lines, varmint hunters are more likely to find as least one bullet that shoots tiny groups in their gun.

Last modified on Monday, 11 April 2011 06:08

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Choose high-quality shotgun ammunition, shotgun shells and shotgun slugs for delivering superior accuracy and downrange performance. To enhance your shooting experience, take a look at some of our shooting accessories like shooting vests, shooting benches, reloading supplies and trap throwers.

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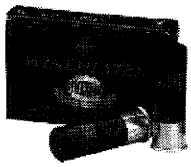
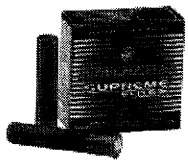


Winchester Supreme High-Velocity Buckshot
$8.99 - $12.99

☐ COMPARE

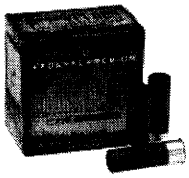
Estate SuperSport Target Shotshells
Bargain Cave
Sale!
$74.99 - $124.99
$54.99 - $109.99

☐ COMPARE



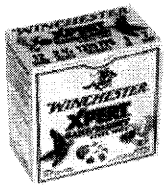
Winchester PDX1 Personal-Defense Shotshells
$13.99 - $15.99

☐ COMPARE



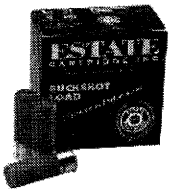
Federal Premium Black Cloud™ Steel - Per 10 Boxes
Bargain Cave
Select items on sale!
$169.95 - $299.95
$159.99 - $279.99

☐ COMPARE



Winchester Xpert Steel Game & Target Shotshells - Per Case
$64.99 - $139.99

☐ COMPARE



Estate 12-Ga. Buckshot – Per Box
$18.99

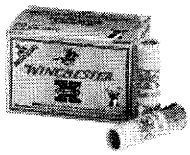
☐ COMPARE

Estate Upland Hunting Shotshells - Per Case
Bargain Cave
Select items on sale!
$69.99 - $94.99
$64.99 - $69.99

☐ COMPARE

Kent Fasteel® Precision Steel Shot Shells - Per Case
$119.99 - $189.99

☐ COMPARE



Winchester 15-Round Value-Pack Slugs
$12.99 - $14.99

☐ COMPARE

Remington® Premier AccuTip Sabot Slugs
Bargain Cave
Select items on sale!
$13.99 - $19.99
$13.99 - $14.99

☐ COMPARE

Federal® Premium Buckshot
Select items on sale!
$6.99 - $9.99
$6.99 - $9.99

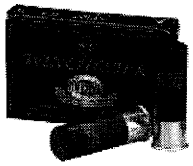
☐ COMPARE

Federal® Truball™ Rifled Slugs
Bargain Cave
Sale!
$4.99
$4.49

☐ COMPARE

Remington® BuckHammer™ Slugs
Bargain Cave
Sale!
$13.49
$6.99

☐ COMPARE

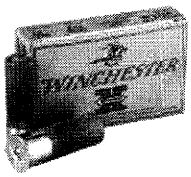


Winchester Supreme Double X® Magnum Buckshot
$7.99 - $8.99

☐ COMPARE

Winchester® WinLite™ Target Loads
$99.99

☐ COMPARE



Winchester Super-X Buckshot Shotshells
$4.99 - $12.99

☐ COMPARE

Winchester Super-X® Power Point Rifled Slugs
$4.99

☐ COMPARE

Remington® Slugger Managed Recoil Rifled Slug
$4.99

☐ COMPARE

CLOSEOUT!

Sellier & Bellot Buckshot Ammunition
Bargain Cave
Sale!
$21.99
$17.88

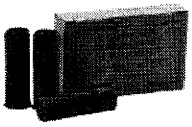
☐ COMPARE

Estate Buckshot – Per 10 Box Case
Bargain Cave
Sale!
$169.99
$154.99

☐ COMPARE

Winchester .410 3" 000 Buckshot with Dry-Storage Box
$134.99 - $259.99

☐ COMPARE

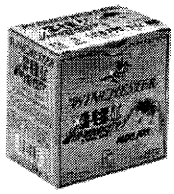


Winchester® Military-Grade Buckshot with Dry-Storage Box
$249.99

☐ COMPARE

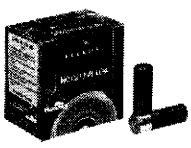
Winchester .410 2-1/2" 000 Buckshot with Dry-Storage Box
$114.99 - $209.99

☐ COMPARE



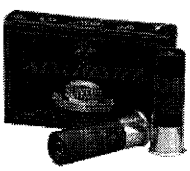
Winchester Xpert Hi-Velocity Steel Shotshells – Per 10-Box Case
$99.99 - $169.99

☐ COMPARE



NEW! **Federal**

Federal Premium

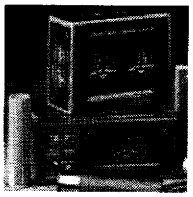


Winchester

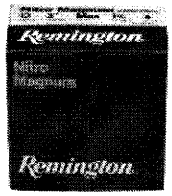
Speed-Shok Steel Shotshells
$109.99 - $189.99
☐ COMPARE

Prairie Storm™ - Per Case
$182.99 - $209.99
☐ COMPARE

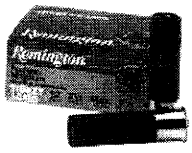
Supreme Partition Gold Slugs
Bargain Cave
Sale!
$17.49 - $21.99
$13.99 - $15.99
☐ COMPARE



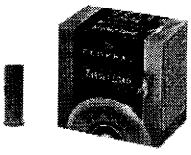
Hevi-Shot® Duck Shotshells – Per Box
$23.99 - $28.99
☐ COMPARE



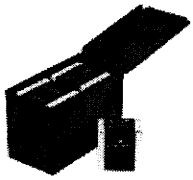
Remington Nitro Mag® Lead Shotshells
$22.99 - $31.99
☐ COMPARE



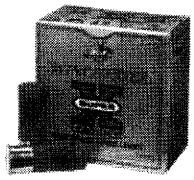
Remington® Premier® Magnum Copper-Plated Turkey Loads
$10.99 - $18.99
☐ COMPARE



NEW! **Federal Top Gun Pink Target Loads - Per Case**
Bargain Cave
Sale!
$64.99
$59.99
☐ COMPARE



NEW! **FEDERAL 12GA BUCKSHOT PER 175 W/AMMO CAN**
$119.99
☐ COMPARE



Winchester Super-X® High Brass Game Loads - Per Case
$139.99 - $184.99
☐ COMPARE

CABELA'S 50TH

NEW! **Cabela's 50th Anniversary Federal Field & Target Shotshells – Per Case**
Bargain Cave
Sale!
$64.99
$59.99
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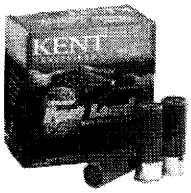
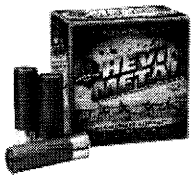
Fiocchi Golden Pheasant Ammunition - Per 10 Boxes
Bargain Cave
Select items on sale!
$139.99 - $179.99
$139.99 - $179.99
☐ COMPARE

MAIL-IN REBATE

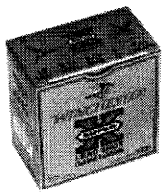
Federal Gold Medal Paper Target Shotshells - Per Case
Bargain Cave
Sale!
$109.99
$89.99 - $99.99
☐ COMPARE



Kent Ultimate Fast Lead™ Shotshells - Per Case
Bargain Cave
Select items on sale!



Hevi-Metal® Shotgun Shells – Per Case
$229.99 - $269.99



Winchester Super-X Game Loads – Per 10 Boxes
$64.99 - $109.99

$109.99 - $159.99
$109.99 - $159.99

☐ COMPARE ☐ COMPARE ☐ COMPARE

COMPARE SELECTED ITEMS ⓘ UNSELECT ALL ⓘ

C/007/047 Incoming

#3860

Carbon Resources, LLC
PO Box 954
Sandia Park, NM 87047
Telephone: (505) 286-1253

22 June, 2011

Mr. John Baza, Director
& Coal Program Personnel
Department of Natural Resources
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84116

Dear Mr. Baza & Coal Program Personnel,

RE: PERMIT APPLICATION RAPTOR MITIGATION PLAN FOR KINNEY NO. 2 MINE - PERMIT NO. C/007/0047

Per discussions with Joe Helfrich, team leader of Kinney # 2 Mine Permit Application, Carbon Resources submits the attached Raptor Mitigation Plan, to mitigate the placing of nesting deterrents in nest # 1541 near Scofield UT.

Three copies of the plan and appropriate portions of Chapter 3 of the MRP with reference to the plan are included for review by the Division.

This submission is accompanied by Forms C1 and C2 as required.

Please feel free to contact me, Greg Hunt at (970) 856-9477, or Ben Grimes at (435) 653-2304 with any questions regarding this application.

Respectfully Submitted,

Gregory Hunt

CC: COAL PROGRAM

RECEIVED
JUN 27 2011
DIV. OF OIL, GAS & MINING

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change ☐ New Permit ☒ Renewal ☐ Exploration ☐ Bond Release ☐ Transfer ☐

Permittee: Carbon Resources, LLC
Mine: Kinney No. 2 Mine **Permit Number:** C/007/0047
Title: Raptor Nest Mitigation Plan

Description, Include reason for application and timing required to implement:
Raptor Nest Mitigation Plan, Response Time is Critical

Instructions: If you answer yes to any of the first eight questions, this application may require Public Notice publication.

☐ Yes ☒ No 1. Change in the size of the Permit Area? Acres: _____ Disturbed Area: _____ ☐ increase ☐ decrease.
☐ Yes ☒ No 2. Is the application submitted as a result of a Division Order? DO# _____
☐ Yes ☒ No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
☐ Yes ☒ No 4. Does the application include operations in hydrologic basins other than as currently approved?
☐ Yes ☒ No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
☐ Yes ☒ No 6. Does the application require or include public notice publication?
☐ Yes ☒ No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
☐ Yes ☒ No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
☐ Yes ☒ No 9. Is the application submitted as a result of a Violation? NOV # _____
☐ Yes ☒ No 10. Is the application submitted as a result of other laws or regulations or policies?
Explain: US Fish & Wildlife Raptor Nest Detrent Mitigation
☐ Yes ☒ No 11. Does the application affect the surface landowner or change the post mining land use?
☐ Yes ☒ No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
☐ Yes ☒ No 13. Does the application require or include collection and reporting of any baseline information?
☐ Yes ☒ No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
☐ Yes ☒ No 15. Does the application require or include soil removal, storage or placement?
☐ Yes ☒ No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
☐ Yes ☒ No 17. Does the application require or include construction, modification, or removal of surface facilities?
☐ Yes ☒ No 18. Does the application require or include water monitoring, sediment or drainage control measures?
☐ Yes ☒ No 19. Does the application require or include certified designs, maps or calculation?
☐ Yes ☒ No 20. Does the application require or include subsidence control or monitoring?
☐ Yes ☒ No 21. Have reclamation costs for bonding been provided?
☐ Yes ☒ No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
☒ Yes ☐ No 23. Does the application affect permits issued by other agencies or permits issued to other entities?
☐ Yes ☒ No 24. Does the application include confidential information and is it clearly marked and separated in the plan?

Please attach three (3) review copies of the application. If the mine is on or adjacent to Forest Service land please submit four (4) copies, thank you. (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Clay Wisdom	C.F.O.	06/22/2011	
Print Name	Position	Date	Signature (Right-click above choose certify then have notary sign below)

Subscribed and sworn to before me this 22 day of June, 2011
Notary Public: Robyn Scott, state of ~~Utah~~ NEW MEXICO
My commission Expires: Nov. 15, 2011
Commission Number:
Address: 500 A St. Hwy 333
City: Tyrone State: NM Zip: 87059

OFFICIAL SEAL
ROBYN SCOTT
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 11/15/11

For Office Use Only:	Assigned Tracking Number:	Received by Oil, Gas & Mining
		RECEIVED JUN 27 2011 DIV. OF OIL, GAS & MINING

Form DOGM- C1 (Revised December 10, 2007)

APPLICATION FOR COAL PERMIT PROCESSING
Detailed Schedule Of Changes to the Mining And Reclamation Plan

Permittee: Carbon Resources, LLC
Mine: Kinney N0. 2 Mine **Permit Number:** C/007/0047
Title: Raptor Nest Mitigation Plan

Provide a detailed listing of all changes to the Mining and Reclamation Plan, which is required as a result of this proposed permit application. Individually list all maps and drawings that are added, replaced, or removed from the plan. Include changes to the table of contents, section of the plan, or other information as needed to specifically locate, identify and revise the existing Mining and Reclamation Plan. Include page, section and drawing number as part of the description.

			DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED
☐ Add	☒ Replace	☐ Remove	Pages 3-41a, 3-41a-1 & 3-41b in Chapter 3 that were submitted on June 13, 2011
☒ Add	☐ Replace	☐ Remove	Exhibit 8 Materials to the end of Exhibit 8
☐ Add	☐ Replace	☐ Remove	
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Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.

The Exhibit 8 materials are an addition to the existing Exhibit 8 - add this material at the end of the existing Exhibit 8 materials.

Received by Oil, Gas & Mining

RECEIVED
JUN 27 2011
DIV. OF OIL, GAS & MINING

April 28, 2011. Copies of the USFWS approval and UDWR email approval are included in Exhibit 4, Other Permits.

As a condition to the nesting deterrent action approval CR commits to mitigation for the deterrent action including a plan approved by the Utah Division of Oil, Gas and Mining , U.S. Fish and Wildlife Service, and the Utah Division of Wildlife Resources. The mitigation plan will be limited to a total of $3000.00 as agreed by the agencies. The mitigation plan will consist of any one or a combination of the following, Purple martin nesting boxes, Osprey nesting platforms, purchasing non-lead hunting ammunition and making it available to hunters to help prevent raptor lead poisoning. The mitigation plan will be completed during the 2011 season (by the end of October), or in a time frame determined and approved by the agencies. Refer to details of the plan including the three alternatives with additional information on each alternative in Exhibit 8, Fish and Wildlife Information.

The final mitigation may include one or more of the alternatives discussed and presented. Details presented in Exhibit 8 provide the basis for preparing cost estimates for each alternative. From the cost estimates, the agencies and Carbon Resources will select the alternative or alternatives for implementation based on getting the most benefit from the money.

Because the construction season at the mine site elevation is very short, and because nesting activity would delay start of construction until fledgelings leave the nest, Carbon Resources LLC petitioned the US Fish and Wildlife Service, for permission to conduct nesting deterrent actions to discourage the birds from nesting within a one-half mile buffer prior to the start of mining activity during the 2011 nesting season. It is believed that the birds will use other sites for nesting. There is ample opportunity for nesting in the general area. This will allow Carbon Resources LLC to start construction activities during the middle of the nesting season and reduce (or eliminate) the risk that the birds would abandon eggs or young at the nest.

After construction has started or at the end of the 2011 nesting season, Carbon Resources, LLC will remove the nest deterrents. It is our experience that Red-tailed Hawks are very adaptable to mining operations. For example, a pair of Red-tailed Hawks successfully nested for several years at the Star Point Mine in Carbon County, Utah within 30 feet of the main access road to the mine, and within 40 feet of an overland conveyor belt which ran for approximately 20 hours per day.

Deterrent Plan

The deterrent plan includes two components:

1. Preventing, or discouraging the birds from using this particular nest by placing one or more orange construction cones in the nest as long as no eggs are present. Carbon Resources LLC will obtain a Letter of Authorization from the U.S. Fish and Wildlife Services' Migratory Bird Permits office in Lakewood, Colorado before placing nest deterrents. If placing a construction cone is not possible, Carbon Resources will consult with the USFW Service and the Utah Division of Wildlife Resources to find another, non-destructive, method of deterrent.
2. If the birds decide to build another nest within the restricted one half mile zone placing orange construction cones (or other methods as above) in those nests also as long as no eggs are present.

The construction cone/s will be placed by using a long ladder, by climbing the tree, or other methods as needed. Every effort will be taken to avoid disturbing the nest.

Upon completion of the 2011 nesting season, the construction cone/s, or other deterrent methods will be removed so the birds will have use of the nest/s again.

Monitoring Plan

1. Monitoring nest #1541 and the area within the restricted one half mile zone for raptor activity during the 2011 nesting season from mid-March to mid-August (details to follow).

Monitoring will be conducted by observing any visible raptor activity in the nest #1541 area as well as observing activity in the general area that may indicate the raptors start constructing another nest. Observations will be conducted from Highway 96 at the entrance to the mine site using spotting scopes and binoculars or from the closest pad on the hillside across from the nest. Observations will be made from first light until 3 hours after daylight once per week from April 1, through May, 2011. After May, monitoring will be conducted every two weeks. This schedule is based on preliminary discussions with Nathan Darnall of the USFW Service and may be adjusted as necessary. Further monitoring may be necessary and will be determined in consultation with the agencies.

The observers will have a digital camera with a telephoto lens to take photos if possible of raptors in the area.

The observers will also have raptor identification guide books at their disposal to help identify raptors.
A detailed record will be made during each monitoring session, including date, times, raptors observed, species, details of their movements, observers' name, and photographs taken. A report of weekly monitoring will be e-mailed to the U.S. Fish and Wildlife Service in Utah after each survey. A summary report will be provided to UDOGM at the end of the nesting season.

~~Mitigation Plan~~

~~1. Cooperating in a mitigation plan yet to be determined in conjunction with the USFW Service and the Utah Division of Wildlife Resources. The mitigation plan will be limited to $3,000, and will not be necessary if no deterrent methods are taken by Carbon Resources.~~

Schedule

Nesting activities can begin as early as March by Red-tailed Hawks, and April for Goshawks, however due to heavy snow cover this year no activity was observed during the first visit to the nest site by Mr. Greg Hunt of Carbon Resources LLC on March 3. During the first formal monitoring session conducted on March 30, 2011, no bird activity at the nest site was observed.

Future Mining Operations

Construction of the mine facilities and operation of the mine will proceed as planned and detailed in the Utah Division if Oil, Gas and Mining, Mining and Reclamation Plan. We believe that Red-tailed Hawks are particularly adaptable (refer to example given above) to disturbance by mining operations. It is very possible that the subject nest will be used in the future while mining activities are ongoing. Carbon Resources is committed to operating in an environmentally responsible manner. We commit to monitoring the subject nest in the future to document activity at the nest.

Noise will inevitably result from the mining operation, however, we believe noise levels will be acceptable. It should be noted that the town of Scofield is located only 1500 feet from the subject nest, as well as Utah Highway 96, which has a rather high volume of truck traffic.

Construction activities at the mine site will include earth moving and typical construction of buildings, conveyor belts, mine openings and associated mine facilities. Normal construction equipment will be used such as dozers, scrapers, track hoes, and cranes. Blasting may be necessary, but we believe it will be very minimal, if necessary at all. Avoidance

Carbon Resources has a raptor proof power pole design included in the Utah Division of Oil, Gas and Mining, Mining and Reclamation Plan. Every effort will be made to minimize any risks to raptors in the area of the mine. Employees at the mine will be instructed to avoid harassment of all wildlife and particularly raptors.

For more information about raptor species of special status including the ferruginous hawk, bald eagle and northern goshawks, refer to Table 2A.

The long-billed curlew is listed by the UDWR as a species of concern, and is rare to the Wasatch Plateau. This species has a strong affinity for riparian and shoreline areas. For more information about this species, refer to Table 2A.

The whooping crane is listed by the UDWR as exterminated in the Wasatch Plateau. For more information about this species, refer to Table 2A.

Exhibit 8

Nest #1541 Deterrent Mitigation Plan

Nest #1541 Mitigation Plan
Kinney No. 2 Mine

Preface

A condition of receiving approval to conduct nesting deterrent actions at raptor nest #1541 is to mitigate. A few mitigation plans were discussed by the U.S. Fish and Wildlife Service, Utah Division of Wildlife Resources, Utah Division of Oil, Gas and Mining, and Carbon Resources representatives. These plans included Purple martin nesting boxes, Sage grouse lek enhancements, purchasing non-lead bullets or shells to help prevent raptor poisoning from lead bullets, and assisting a raptor rehabilitation specialist with costs. During a meeting with Joe Helfrich of the UDOGM and Leroy Mead of the UDWR on June22, 2011 two of these alternatives were discussed along with an alternative of constructing Osprey nesting platforms. Considering the three alternatives discussed (Purple martin nest boxes, Osprey nesting platforms, and non-lead bullets/shells) it was decided that a proposal to mitigate using one or more of these alternatives would be proposed as a mitigation plan.

Carbon Resources has committed to and received approval for a total of $3,000.00 for mitigation efforts. The final mitigation may include one or more of the alternatives discussed and presented here. Details presented to follow provide the basis for preparing cost estimates for each alternative. From the cost estimates, the agencies and Carbon Resources will select the alternative or alternatives to be constructed based on getting the most benefit from the money.

Mitigation Plan

Alternative 1 –

Install Purple martin nest boxes at the mine site and/or at other Scofield area locations. The other locations that we have considered are at Scofield Town property (town park, and cemetery); at the Utah State Park at Scofield Reservoir (two possible locations), and at private property locations in the Scofield area. This last option would be completed by offering nesting boxes to local residents and placing them on their private property.

Carbon Resources commits to installing as many nesting boxes at the Kinney No. 2 Mine site as recommended by the UDOGM, UDWR, and the U.S. Fish and Wildlife Service. In addition Carbon Resources will coordinate with the UDOGM, UDWR and the U.S. Fish and Wildlife Service in finding other locations mentioned above. We believe that approval from Scofield Town will be possible since the town residents are very excited to see the mine operations start, and have been very cooperative. We also believe that locations at the Utah State Park at Scofield may be a good alternative and are hopeful the Utah State Park Authorities will concur.

Number of nest boxes

Commercially manufactured next boxes are available for reasonable prices. (Refer to the materials accompanying this proposal at the end of the plan). One such nesting box is manufactured by S&K Manufacturing that markets them as kits including everything needed for a complete installation. Their Combo American Barn - 12 Family Purple Martin Barn provides 12 ea. 6" x 9" compartments, mounted on a 12 foot tall pole. The compartments come with Starling proof openings, as well as perches. The pole comes with a pulley system for easy lowering of the barn for maintenance. The price of this model is $130.00, therefore approximately 11 kits could be purchased with the $3,000.00 commitment by Carbon Resources assuming an installation cost of $130 each (11 x $130.00/kit +$130.00 X 11/installation). The number of nesting boxes may vary by manufacturer dictating the final number of

boxes installed. Other nest boxes are also available. The final choice of nest boxes will be coordinated with the agencies involved.

Installation and maintenance

Carbon Resources will install and maintain the boxes for 10 years, except those boxes private property owners choose to receive and maintaine on their own . Installation will be by manufacturers' and UDWR and UDOGM recommendations. If installed before Kinney # 2 site construction, they will be installed in areas that will not be used for mine facilities. Locations for the installations will be coordinated with the agencies mentioned above. Maintenance will also be done according to manufacturers' or Purple martin experts recommendations, or agencies recommendations. Several resources for Purple martin information has been found on the internet, copies of which are attached to this plan. (Refer to the materials at the end of this proposal for details on maintenance and Purple martin issues).

As discussed abovethe option of having Scofield Town residents maintain nesting boxes at their property was also discussed and is a viable alternative. Carbon Resources will work with the agencies in accomplishing this alternative if it is chosen.

Alternative 2

Install Osprey nesting platforms in the Scofield area. Since Ospreys feed exclusively on fish it is assumed that the locations will need to be near Scofield Reservoir. Locations for the platforms will be selected by UDOGM and UDWR, with input from the U.S. Fish and Wildlife Service. The Utah State Park locations at Scofield Reservoir may be locations that are favorable, or other sites on private property can be pursued. The number of nest platforms constructed will depend ultimately on which alternative/s are chosen that can be constructed within the budget.

Design details and information on Osprey nesting platforms is included at the end of this proposal. A plethora of information is available on the internet; only a small portion of which is included with this proposal. Construction of the platforms is straight forward and can be accomplished by any reasonably qualified carpenter. Installation of the pole will be the biggest challenge, and will be accomplished by any necessary means depending on the locations chosen.

Alternative 3

Purchase and make available for sportsman's use non-lead bullets and or shotgun shells. Non-lead ammunition is becoming desireable and even required in some cases to help prevent lead poisoning of raptors from eating contaminated dead animals and birds. This ammunition will be made available by any reasonable means including having it available at the Snack and Pack convenience store in Scofield, or by other methods recommended by the UDWR and UDOGM. Carbon Resources has discussed this alternative with the owner (Jim Levanger) of the Snack and Pack store, who graciously volunteered to cooperate with the program. Jim recognizes the benefits of non-lead ammunition and also believes this program would be a good merchandising tool for his store.

Summary

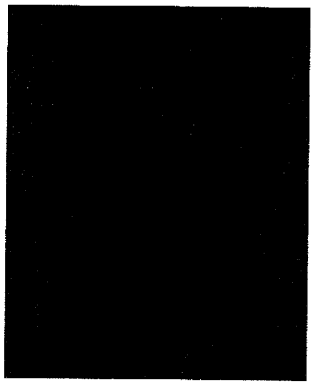
Carbon Resources is excited about this mitigation opportunity and looks forward to working with the agencies to accomplish the plan. We commit to completing the mitigation plan during the 2011 construction season (normally by the end of October), or in a time frame determined and approved by the agencies.

Alternative 1

Purple martin nesting boxes

How to Succeed as a Purple Martin Landlord

The first time that purple martins sailed in and flew around my gourds on a pole, I was amazed at their musical and entertaining chatter. It seemed to embody happiness.



If you live in North America east of the Rockies, purple martins probably nest somewhere fairly nearby. And if you fulfill their needs, you have a good chance of purple martins moving in to the housing you provide.

For those of us who are just starting out with purple martins, there is a certain amount of anxiety as we eagerly await the first pair of martins to accept our housing and begin their nest.

Because that's the name of the game. Getting the first purple martins to move in. Until that happens, we're just *wannabe landlords.*

© Chuck Abare

Once a pair of purple martins accept our housing and raises a family in it, our colony is on its way.

The next year, the same birds will return. By that time the males will be in their glossy blue-black plumage, and they will look handsome as they perch on their houses. The photo at left, of an adult male at left, was taken by Chuck Abare, whose website has loads of information about purple martins. (Click the picture for a larger version of it.)

The second year, your first tenants' offspring may return with them as well. The young males will look mottled, as shown in Chuck Abare's picture at left. (Click the picture for a larger version of it.) With proper care, the colony will grow larger year by year.

Fortunately, a lot of people have been studying exactly what purple martins require. And the better we can fulfill their needs, the more likely they are to become our tenants.

So here's what purple martins need

1. Colonial living

Purple martins nest in colonies of 2 to 200 pairs. So give them clustered housing.

You can start with three or four units and add more as your colony expands. The best thing to potential nesters is martins already nesting there. That's why it's crucial to make the new housing as ideal as possible, in order to get that all-important first pair of birds.

2. House of wood, gourd, plastic, or metal

Purple Martins are not too picky about the material for their birdhouses. Many kinds of purple martin houses are available. Here are some possibilities:

- grow your own birdhouse gourds
- build a wooden apartment house
- purchase ready-made martin houses
- hang plastic gourds that mimic natural ones

Plastic "gourds" called SuperGourds make great purple martin houses. they come with rain guards and clean-out access doors. SuperGourds appeal strongly to martins and seem to result in excellent nesting success. And they certainly are beautiful!

Home up high

A purple martin house must be mounted on a pole or post at least 10 feet high. Don't attach it to a tree, because cats and raccoons could easily climb to the nests, and purple martins won't move in.

Proper martin houses are on poles that can be raised and lowered vertically for inspection. Most systems utilize telescoping poles or a winch. A winch system is easier to use, because the martin houses can be heavy when they're full of nests and eggs or babies.

A popular kind of martin housing with a winch is the Lonestar Pole and Gourd Rack. We recommend it with SuperGourds, but any kind of gourds can be used.

A house with a view

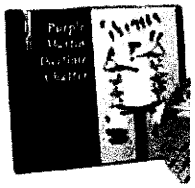
Attract Purple Martins with their own Songs!

The most attractive thing to purple martins about a potential colony. Here are two CDs that will help give the impression that your birdhouses already host a thriving colony.

Playing Purple Martin Dawnsong is a way to get a young purple martin's attention.

Play the distinctive dawnsong of the adult males near your martine housing at 3 or 4 A.M. The young males flying high overhead in predawn darkness hear the songs and come down to investigate.

Then if they like what they find, they may stay and found your purple martin colony.



Some people play another CD during the day. It's the Daytime Chatter CD, and it sounds like a busy purple martin colony.

I was amazed when I first played this song. Before that, I had never seen purple martins at my gourds. When I put on the martin songs, young purple martins were there within an hour, sitting on top of the housing and joining in with their own songs.

Location is crucial for purple martins. Their houses need to be in an open area so they can sail straight into the houses from at least two directions. Put their house in the middle of your biggest open area.

They don't want to maneuver through trees or dodge telephone wires. No trees taller than the height of the martin house should be within 60 feet of the colony.

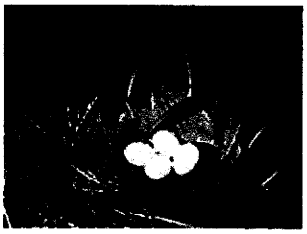
Where they can see you

The purple martin house should be close to your own home. Purple martins want to see people near their nests. (They know that human activity offers them protection against predators. Here's how it might have started, long ago.)

Near water

The birds will fly a couple of miles to water if necessary, but they prefer to nest within a half mile of a lake or other water. I know people in my small town of Fairfield, Iowa, who got martins even though there was no water in sight. But the town reservoir was only half a mile away.

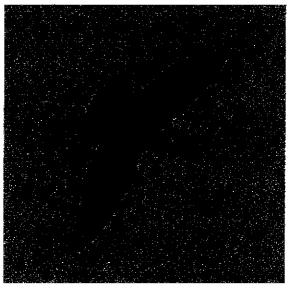
Roomy rooms



© Chuck Abare

Each purple martin compartment should be at least 6" x 6" x 12". Some martin houses are sold that are only 6" x 6" x 6". Research shows that this is too small for purple martins to lay a full clutch of eggs (up to 7) and raise the young. You can find martin houses for sale that are only 6" x 6" x 6", but we do not recommend them. The SuperGourds are ideal.

Good management



Don't buy a purple martin house if it doesn't provide for you open it up to clean out the compartments. You need to be able to get in there and make sure there are no house sparrows or starlings nesting inside.

All good purple martin houses allow access to the landlord!

Don't be intimidated by the task of examining the nests. The purple martins won't mind in the least. Remember, they *like* people. And they will have greater nesting success if we do our job. Besides, it just about the most

And let your colony LOOK convincing, too!

You may not be fooling the purple martins into thinking that live birds are inhabiting your colony, but a couple of purple martin decoys sure do get their attention.

They're plastic and practically indestructible. Mine have held up to two years of being outside, and they look as good as new.

It's kind of cheery having them up on the houses during the winter, when the purple martins are gone. Several people have asked me what kind of birds those are.

Deluxe Gourd Rack

One of the best-designed martin housing systems is the

fun thing in the world to look into the martin nest and see the baby birds inside.

Safe from enemies

A purple martin's worst enemies are two aggressive, non-native birds that have been introduced into North America — the house sparrow (below, left) and the starling (below, right).

Both covet purple martin houses and will take them over if the landlords let them. If the martin house is to succeed, the landlord must check the house every few days (or even daily in some cases) and remove any starlings or sparrows who try to build there.

And for protection from cats, raccoons, and snakes, a purple martin house requires a predator guard around the pole near its bottom. (You can see a predator guard around the pole in the photo up in the middle of the page.)

How it all began
SuperGourds - the best housing for purple martins
Deluxe Gourd Rack
The Pole and Winch
The Alamo martin house
When to Put up Purple Martin Housing

Copyright 2008 Diane Porter
Flying purple martin photos © 2007 Michael & Diane Porter

Deluxe Gourd Rack, shown above.

This system utilizes a pulley system that is easy to use. It lets you lower the houses for inspection.

Purple martins don't mind having you look into their houses. This is one bird that seems to know that we are its friends!

And if you want to see the birds up close...

Everyone interested in wild birds deserves her or his own binoculars.

Watch the action at your purple martin house as if you were standing 8 times as close.

A good binocular for getting started shouldn't be expensive, but it must have good optical quality.

Our favorite starter binocular is the Eagle Optics Triumph 8x25.

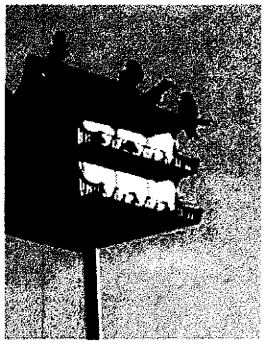
More Birding Tips

Home FAQ Tips Birdbaths Stories DVDs Software Optics Bookstore Orders

The Best Purple Martin Houses and Gourds

Information about the Best Purple Martin Houses and Purple Martin Gourds brought to you by

S&K Manufacturing, Inc. 1001 Liberty Industrial Dr. O'Fallon MO 63367 1-800-764-8688



urple Martins Accommodations by S&K MFG, Inc.

Purple Martin Fledgling

Adult Purple Martins

For the Do-It-YourSelfer,
S&K Manufacturing has ***Free Purple Martin House Plans*** at feel free to visit and let us know how they work for you. Thanks and Take Care of Your Martins.

History | Locating Housing | Martin Enemies | Keeping Colony | Final Thoughts | S&K Purple Martin Houses / Gourds/ Racks & Misc. | Links of Interest

You and many others today share your love of the martin with many past generations of people who have lived on this continent. S&K Manufacturing has the latest in technology and innovation in purple martin housing, we want to improve your chances of attracting this magnificent bird, with some background on purple martins and their present day requirements.

HISTORY

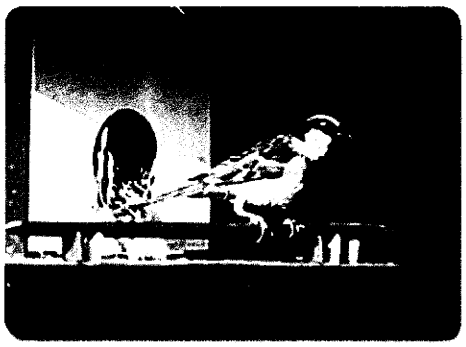
The purple martin's association with man goes back many years to the days when Native Americans hung gourds out for them. People later started erecting wooden, multi-compartment units in hopes of attracting this wonderful bird, and eventually martin houses made of other materials and plastic gourds began to be manufactured. Over the years martins in the entire section of the United States east of the Rocky Mountains have become totally dependent on man for nesting sites. Since the fate of these beautiful birds is now in our hands, it is extremely important that we provide adequate housing in which they can raise their young, and also that we can properly manage it.

LOCATING HOUSING

Often people with good intentions purchase a martin house or gourds, wanting to attract this bird, but they aren't adequately prepared to be responsible landlords. You should be aware of some facts to better your chances of being successful. One important piece of knowledge is that the martin has natural predators, such as owls, hawks, snakes, and raccoons; predator guards can be obtained for use on the housing to help prevent them from killing the martins. You should also erect your housing in the most open area available. Martins will not inhabit a house placed under a tree because of the threat of owls, hawks, and other possible predators. It is recommended that the housing be at least 40-60 feet from any trees taller than the housing. Martins feel a sense of protection being close to people, so place your housing close to human dwellings in a place that offers adequate open area with enough room and time for them to be able to flee when they see aerial predators.

PURPLE MARTINS' TWO WORST ENEMIES

European Starlings



English House Sparrow

Not only does the martin have these food-seeking predators to watch out for, it also has to contend with two enemies that aren't even out looking for a meal but are just trying to steal the nesting sites from the martins. The two birds that have been most detrimental to the existence of the martin are the European starling and the English house sparrow.

Unlike the purple martin, which is native to North America, both starlings and house sparrows are species that were introduced to North America. Some pairs of each were brought over to the United States from England in the late 1800's, and their numbers have increased dramatically ever since. At the same time the martin population, like that of other native cavity-nesting birds here, has drastically decreased. This is not a coincidence; the declining numbers of our native bird species are directly related to the population explosion of the European starling and the English house sparrow. Note: The English house "sparrow" is not really a sparrow at all; it's actually a weaver finch.

Each fall the purple martin migrates to South America and returns to the United States and Canada the following spring. Starlings and house sparrows, on the other hand, stay in their territory year-round. As if the arduous flight back from South America doesn't already take a big enough toll on the martins, upon their return in the spring, they often find that much of the existing housing has already been claimed by these two foreign species and are usually forced to try to find a nesting site elsewhere. Even if a martin pair does manage to find an empty cavity in which to raise a family and is fortunate enough to reach the egg-laying stage, the martins' efforts oftentimes end in failure because of the presence of their two bird enemies.

If starlings have already taken over a martin house, they will chase off any investigating martins. If martins are able to start nesting before any starlings show up at the colony, that doesn't mean that the starlings will leave the martins alone. When the martin pair is out foraging for insects, starlings will enter the cavity and destroy any eggs or nestlings found there. Upon their return, the martins will be chased off by the starlings. If a starling can trap an adult martin inside the compartment, the martin doesn't stand a chance against the sharp, powerful beak of its adversary. The starling will inflict mortal wounds on the martin. Once the starlings have the martins out of the way, they will proceed to build a nest, sometimes right on top of the eggs or young, and use the cavity to raise their own brood.

European starlings are deadly enemies of the purple martin, but English house sparrows can wreak their own havoc on a martin colony. They also investigate a martin colony intent on propagating their kind and will fill nesting compartments so full of nesting materials that martins will be unable to enter them. Very often the owner/landlord of a colony may see both martins and sparrows nesting in a martin house and be under the mistaken assumption that the two species are co-existing peacefully. Reality, though, is that the sparrows will go from compartment to compartment pecking holes in the eggs of the nesting martin pairs. This accomplishes the sparrows' goal, which is to prevent the martins from raising young, thereby reducing their future competition. Martins will abandon the colony after that, because it wouldn't be in their best interest to stay at a site where they had nest failure. Unfortunately, starlings and house sparrows don't limit their aggression solely to martins but direct it toward all of our other native cavity-nesting birds as well.

KEEPING YOUR COLONY

What can you as a martin landlord do to prevent this destruction from occurring at your martin colony? The key to getting and keeping a successful martin colony is to manage it properly. Since we at S&K Manufacturing, Inc. are concerned about the future of the purple martin, we have designed our new line of housing to help you successfully manage a martin colony. Our sturdy poles allow for lowering of the housing and therefore easy inspection to monitor the progress of each martin family and ensure that all is going well. The newly enlarged compartments in the house and larger size of the gourds promote better breeding success of the martins; they tend to raise more babies when provided with roomier nesting cavities.

In addition to the improvements already mentioned, another new feature is the crescent-shaped entrance holes that keep out virtually all starlings. In very rare instances, a starling that is smaller than normal might be able to enter the cavities; however, this is by far the exception. Although the entrance holes will prevent all or mostly all starlings from entering the cavities meant for martins, they will not deter house sparrows; this is because of the smaller size of these birds. A responsible martin colony manager, however, can and should be vigilant about keeping them out of the housing. No bird except purple martins should be allowed in the martin house/gourds. Martins, in all likelihood, will not nest in housing in which another species has already established its territory; the martins will be chased off by the other birds. If you notice any birds other than martins trying to lay claim to the housing, plug up the holes if you don't yet have martins and force the birds to go elsewhere. If they are native birds like Bluebirds and Tree Swallows, put up separate housing for them. But you should never allow house sparrows or starlings to get started building nests in houses or gourds that are much needed by the purple martin, whose population has dwindled in the past century. Law protects the purple martin, being native to this continent, but not the English house sparrow and European starling. It is perfectly legal to trap and/or shoot them. Most birding societies and wildlife federations promote these actions because starlings and house sparrows are taking a devastating toll on our native-cavity nesting birds. Most people just simply are not aware of what damage these two non-native species are doing to our native cavity-nesting birds and ecosystem.

A FINAL THOUGHT

As you can see by now, there is more to being a successful martin landlord than merely buying a house and/or gourds, putting them up and letting nature take its course. Your interest in Purple Martins already demonstrates your desire to attract purple martins. We have provided you with the latest in housing design and web site links to help you accomplish your goal of having a healthy and thriving purple martin colony that will last for years. It is our recommendation that your next step be to use available resources such as the internet or recent editions of books on this bird. Knowledge goes a long way toward attracting purple martins and having them return to your location year after year. Reading about them and sharing your hobby with others will tremendously help the purple martin in its fight for survival. Our best wishes in your endeavors, S&K Manufacturing, Inc.

This information is brought to you by S&K Manufacturing

DEPARTMENTS

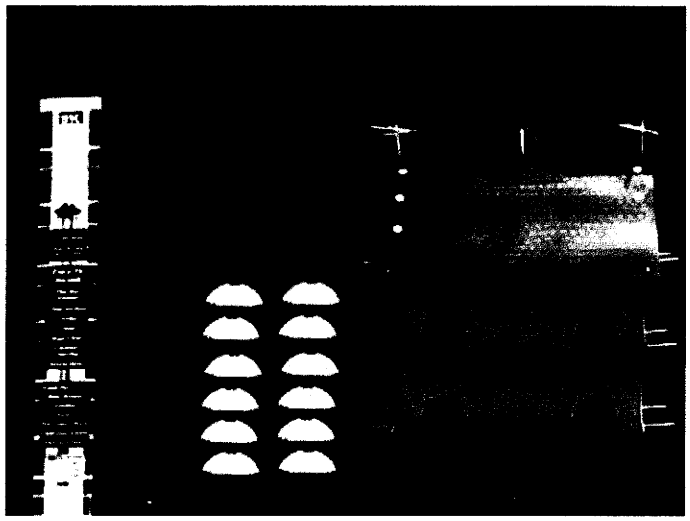
- Combination Specials
- Purple Martin Houses
- Purple Martin Gourds
- Poles
- Pole Accessories & Adapters
- Purple Martin Gourd Racks
- Accessories for Purple Martin Gourds & Houses
- Flag Poles
- Blue Bird / Tree Swallow Houses
- Purple Martin Decoys
- Purple Martin Gifts / Stickers
- Bird Feeders
- Bat House
- Gift Certificates
- PYP Products
- Dave's Corner

ACCOUNT INFO

- VIEW BASKET
- ACCOUNT INFO
- REQUEST CATALOG
- ADDRESS BOOK

Home > Combination Specials

Combo American Barn - 12 Family Purple Martin Barn



Item Number: CAB

Unit Price: $129.95

Quantity 1

BUY NOW

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Detailed Description

This is a great way to get started! This Combo pack comes with everything you need.

FREE SHIPPING on this Combination Special

S&K Manufacturing, Inc Purple Martin Houses are constructed of 100% UV Protected Injected Molded Polypropylene Copolymer Plastic.

CAB Includes the following:

*** 12 Family Purple Martin American Barn (AB)**

-- 12 Large compartments 6"x 9"
- Entry Doors are Starling Resistant
- The AB is EXPANDABLE to include multiple floors by adding additional houses.

*** 12 foot 1.9" Round Pole (RP19)**

The RP19 is a 12 foot 1.9 inch O.D. Steel Pole which brings strength and durability to a line of New S&K Products for the 2009-2010 season. The RP19 is a Rope and Pulley system but can add an optional winch to the pole.

*** Perch Kit (PK)**

Perches that snap on the side walls of your house for the Martins to perch, also includes 2 antennas to snap into the roof.

* Crescent Door Plug Set (SG12)

Crescent door plugs are used on the entrances of the 12 Family Martin House to prevent unwanted guests.

* Plastic Ground Sleeve (GS19)

The Sleeve enables you to remove your pole from the ground for maintenance or to Move your Quad-Tel Pole to a new location with ease! Install the Ground Sleeve wherever you may want your pole!

* House Snaps Together
No Tools Required
* Lifetime Warranty on the House

How To Assemble Video of AB Assembly
How To Assemble Video of RP19
video coming soon
How To Assemble Video of GS19
video coming soon
How To Assemble Video of PK
video coming soon
How To Assemble Video of SG12
video coming soon

Poles and adapters sold separately
Purple Martins Not Included

Free Shipping on all Orders Over $64.99

Shipping & Handling	
Order Total	**S&H Charge**
$0.00 - $9.99	$5.50
$10.00 - $19.99	$8.50
$20.00 - $64.99	$15.00
$65.00 Or More	FREE SHIPPING

We Ship USPS, UPS, Yellow Freight, or Common Carrier, Whichever is Most Economical. Most Orders Received Within Five to Seven Working Days.

Information Pages on Our Products which include Additional Images and Descriptions are listed below

http://www.sk-mfg.com http://www.skmfg.us http://www.purplemartin.net
http://www.purplemartin.us http://www.finchfeeder.com http://www.tubefeeder.com

Free Websites

http://www.freepurplemartinhouseplans.com http://www.songbirdfamily.com
http://www.pmcca.org

See our Exciting New Division of S&K Manufacturing, Inc.

http://www.pictureyourpassion.us http://www.refurbwhiteboard.com
http://www.onlydecalsandstickers.com http://www.eclipsetees.com
http://www.littlesistersystem.com

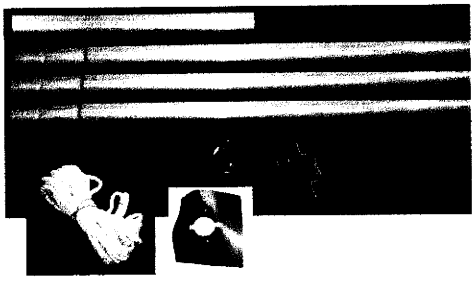
last updated in the month of December 2009
Thank you for Visiting & Shopping , The S&K Web Design Group

INSTRUCTIONS FOR INSTALLING YOUR NEW RP19 POLE

WARNING: FOR YOUR SAFETY, DO NOT ERECT POLE NEAR ELECTRICAL WIRES IN THE AIR OR UNDER THE GROUND OR NEAR LARGE TREES.

ITEMS INCLUDED IN THIS PACKAGE:

- 3 - Swedge Pole Sections
- 1 - Top Pole Section
- 1 - 22-foot Nylon Rope
- 1 - Topper Pulley
- 1 - Pulley Wheel
- 1 - Nut & Bolt
- 1 - Rope Cleat
- 1 - Rain Guard
- 2 - Snaps



S&K Manufacturing, Inc.
1001 Liberty Industrial Dr.
O'Fallon, Missouri 63366
www.skmfg.com
1-800-764-8688

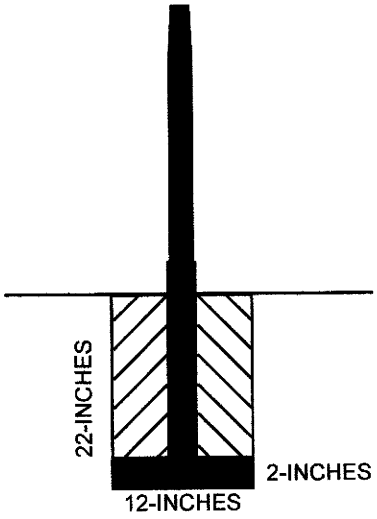
Expand your pole with additional pole sections. Pole sections can be purchased by calling S&K at 1-800-764-8688.

STEP 1:

Determine a site to assemble the pole. Keep pole away from power lines both above and below ground. Keep pole approximately 30 to 40-feet away from trees and other obstructions.

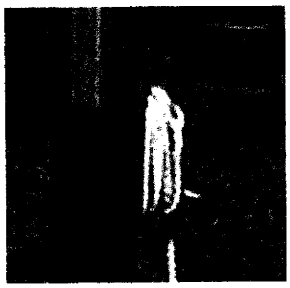
STEP 2:

After a safe location has been determined for raising your RP19 Pole, dig a hole approximately 22-inches deep and 12-inches in diameter. Create a 2-inch platform of concrete at the base of the hole. Let set for 1-hour. If using an S&K pole sleeve, place the pole sleeve in the center of the concrete platform and then insert one of the swedge pole sections into the pole sleeve. **MAKE SURE SWEDGE END OF POLE IS POINTING UP.** If no pole sleeve is being used, place one of the swedge pole sections in the middle of concrete platform and set plum. **MAKE SURE SWEDGE END OF POLE IS POINTING UP.** Using one bag of 80lbs Quik-Krete, mix properly by following the instructions on the concrete container. Pour concrete mix into the hole. DO NOT POUR CONCRETE IN CENTER OF POLE SLEEVE OR POLE. Make sure pole is perfectly vertical/plumb before concrete is left to set and dry. Let concrete set for 24 hours before proceeding to step 3.



STEP 3:

After the concrete has set for at least 24-hours, insert another swedge pole section onto the top of the section already plumb from step 2.



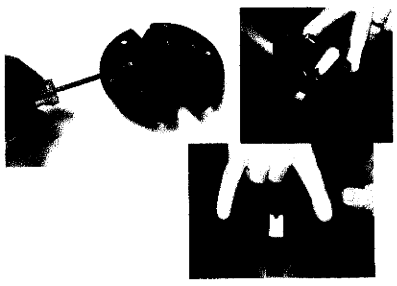
STEP 4:

Align the Rope Cleat to a comfortable position onto the pole section from step 3. Firmly secure the Rope Cleat using the provided self-tapping screws. Self-tapping screws can be inserted using an electric screwdriver.

STEP 5:

Assemble the pulley by pushing the provided screw through the topper and pulley wheel. Screw the bolt into the accompanying nut until bolt is firmly hand-tightened. Then run the provided rope through the pulley topper until the rope is centered on the pulley topper.

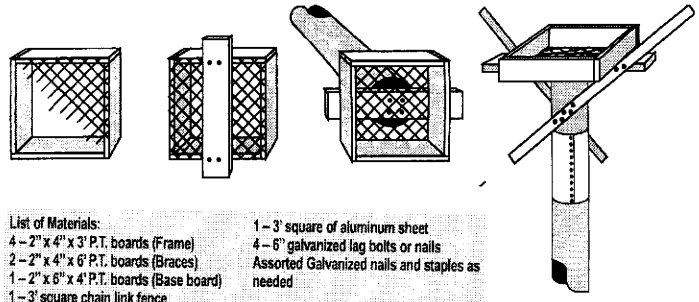
TIP: *If you are using an S&K Purple Martin House attach the included rain guard to the pulley topper by simply snapping it into place using the provided snaps. Line up the holes on the rain guard to the make sure the rope is able to slide through the rain guard's openings.*



Alternative 2

Osprey nesting platforms

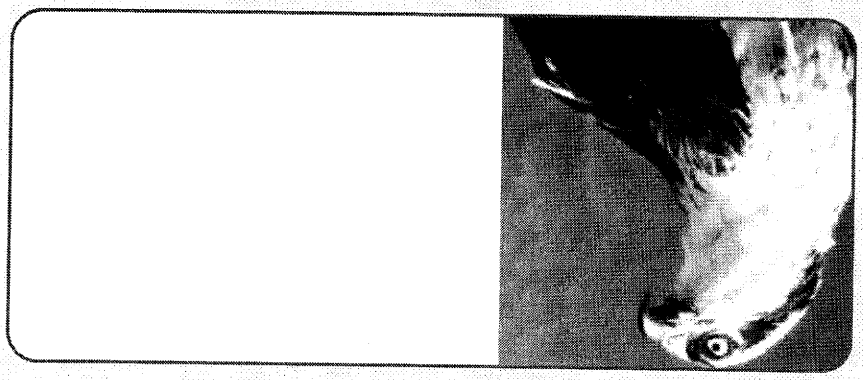
How to build a Platform



List of Materials:
- 4 – 2" x 4" x 3' P.T. boards (Frame)
- 2 – 2" x 4" x 6' P.T. boards (Braces)
- 1 – 2" x 6" x 4' P.T. boards (Base board)
- 1 – 3' square chain link fence
- 1 – 3' square of aluminum sheet
- 4 – 6" galvanized lag bolts or nails
- Assorted Galvanized nails and staples as needed

STEP #1: Nail the four frame boards together.
STEP #2: Staple the chain link fence to the top of the platform frame.
STEP #3: Nail the base board across the middle of the platform frame.
STEP #4: Turn the entire platform over so that the base board is on the bottom. Mount the platform on the top of the pole using the 6-inch nails, before the pole is placed upright.
STEP #5: Mount the brace boards on opposite sides of the platform, with one end attached to the pole and the other end attached to the base board, extending a few feet above the platform.
STEP #6: Wrap the sheet of aluminum around the pole so that it will be at least 10 feet above ground level after the pole is planted. (This acts as a guard against raccoons climbing the pole into the nest.)
STEP #7: Install the pole at the chosen location. To help attract ospreys to the platform, place a few sticks (no longer than 3/4 inches in diameter and 18 inches long) within it.

Disclaimer:
Neither Lee County, The International Osprey Foundation, LCEC, or their employees shall be held responsible for injuries incurred in the construction or installation of the platform or for the faulty construction or installation of platforms that may result in damage or injury. The installer assumes all risks in erection of structure.



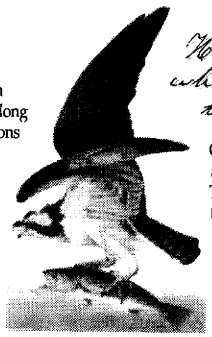
LCEC
P.O. Box 3455, North Fort Myers, FL 33918
239-995-2121

The International Osprey Foundation, Inc.
P.O. Box 250, Sanibel, FL 33957
239-472-5218

Prepared in cooperation by:
Lee County Division of Environmental Sciences
P.O. Box 398, Fort Myers, FL 33902
239-335-2477

What is an osprey?

The osprey (Pandion haliaetus) is a large, fish-eating hawk that is found on every continent of the world except Antarctica. They are generally found along the seacoasts, bays and large unfrozen rivers and lakes. Northern populations migrate to warmer climates in the winter. Around the world, the osprey population has suffered because of hunting, egg collecting, and the abuse of pesticides like DDT which can weaken egg shells. At one time considered a "threatened" species in this country, the osprey has made a comeback. In Florida, ospreys are currently designated as a Species of Special Concern in Monroe County and are protected by several state and federal laws. Because of its position at the top of the food chain, the osprey is considered to be an "indicator" species, whose health and success directly reflects the status of the overall coastal environment.



How will I know one when I see one?

Adults are almost eagle size, about 21 to 24 inches tall with a wingspan of 54 to 72 inches. They are dark brown, with a white underside and a mostly white head. Because of their size and dark brown body with a partially white head, ospreys are often mistaken for adult bald eagles. They can be distinguished by two main features – eagles don't have a white underside and they don't have an ospreys "mask", a dark brown streak that runs from the eyes across the cheeks to the sides of the neck. In flight, ospreys are easily distinguishable by the white underparts, the long wings with a conspicuous bend at the wrist, and barred brown and white tail and flight features.

In hunting for fish, its primary prey, the osprey hovers over the water and then dramatically dives in feet first. The bird then splashes up out of the water, pauses to shake the water from its feathers, and (if successful) carries the fish "torpedo-style" back to its perch or nest. To help in its quest for food, the osprey has developed a couple of unique physical features. The lower surface, or pads, of the toes are covered with rough spicules, while help it hold slippery fish. Also, it is the only hawk that has a reversible outer toe as in owls; this enables it to grasp its prey with to toes in front and two toes in the back.

How and where do they nest?

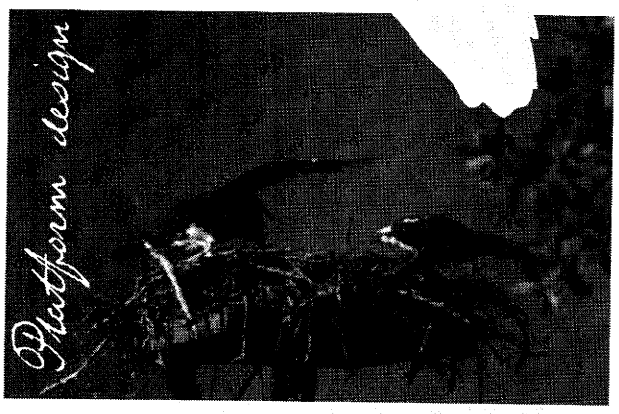
Osprey nest in Florida from about December to May. They mate for life and very territorial, with some pairs returning to the same nest for decades. The nests are built of sticks, but often include seaweed, bones, driftwood, and other material from marshes and sites not far from the water, with a tall snag relatively separated from surrounding growth. If the ospreys decided that the snag of dead tree (for example) looks promising, they will hover over it and drop sticks until they catch. More sticks will be added until they become intertwined.

The search for tall, semi-isolated sites has often led to ospreys nesting on man-made structures, including antennas, channel markers, chimneys, windmills and utility poles. In utilizing these structures, ospreys have demonstrated an ability to successfully interact in the presence of human activity. Of course, they also have created an occasional nuisance. To aid in the reestablishment of ospreys in many areas, and sometimes to keep them off man-made structures, nesting platforms have been erected. These platforms have proven to be beneficial, providing a stable base for nests and better nest survival.

How can I put up a platform?

If you are interested in establishing a nest platform for ospreys on your property, you must ask yourself one important question – "Am I willing to live with a large wild bird which may make noise, eats and discard fish, and make a mess from its nest or a nearby perch?" If that is acceptable to you, you must then ask whether your neighbors will mind. There's no point in creating a confrontational situation that may eventually lead to the harassment of these protected birds.

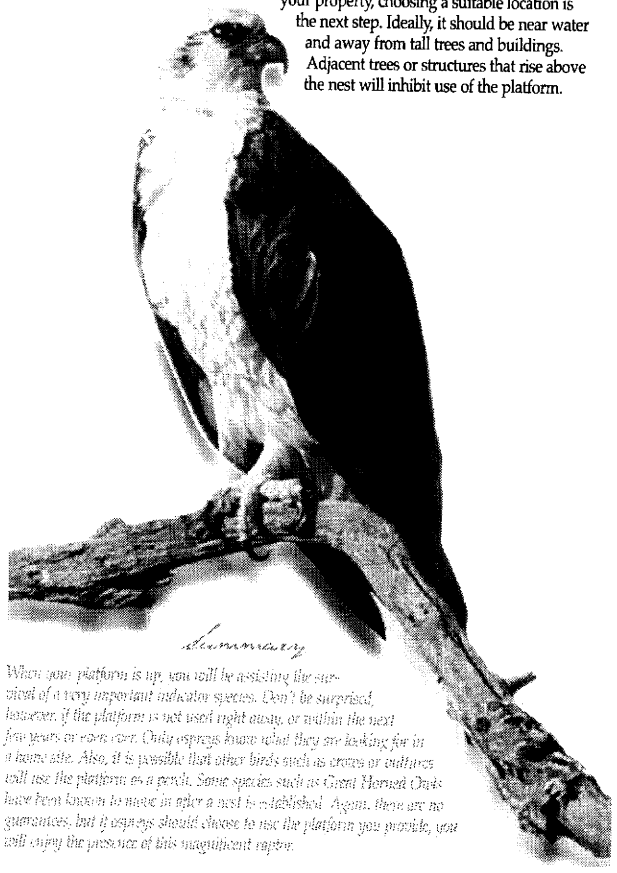
The next step in to determine if ospreys would be interested in nesting on your property. Remember, they prefer areas near water, so far inland areas may not be appropriate. On Sanibel Island which is a barrier island on the Gulf of Mexico, ospreys nests are found in the middle of the island and on the bay side. However, very few are located on the gulf side. If there are no ospreys currently nesting anywhere near your property that may be an indication that the site is undesirable. Even if ospreys currently nest nearby, a new platform may not be used. Ospreys are very territorial and the size of the territories varies greatly. Once you have decided that ospreys might nest on your property, choosing a suitable location is the next step. Ideally, it should be near water and away from tall trees and buildings. Adjacent trees or structures that rise above the nest will inhibit use of the platform.



Once a suitable location is determined, you will need to make arrangements to have a utility pole or something similar erected, preferably to a height of 30 to 40 feet. This is what the platform will sit upon. Utility companies often will sell and install old poles, for a price. In Lee County, those interested can contact Florida Power and Light Company or the Lee County Electric Cooperative (LCEC) It is also essential to contact your local city or county building department to find out if a building permit is required to erect a platform.

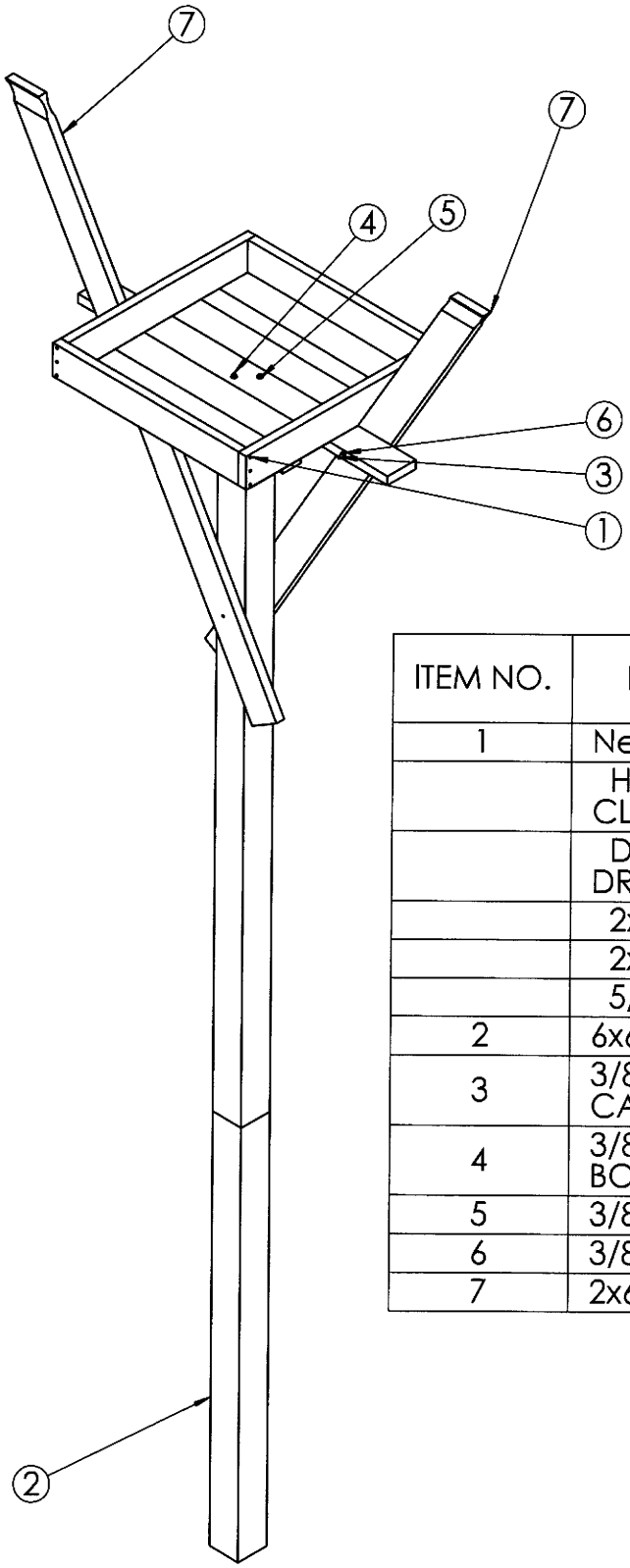
One suggested design for a platform to be mounted on a utility pole is included in this brochure. Variations in design or materials are certainly possible. Remember that this platform will be exposed to the elements, so all wood should be pressure treated, and the platform should be examined after a few years to determine its condition.

In addition to this design, particularly in areas that are not suitable to heavy equipment, a design known as the "Sanibel Tripod" can be used. Essentially, this is similar to a three-legged tepee that can be transported to a site and erected manually by four or five adults. For more information on this alternative design, or for membership information, please contact The International Osprey Foundation at P.O. Box 250, Sanibel, Florida 33957-0250.



Summary

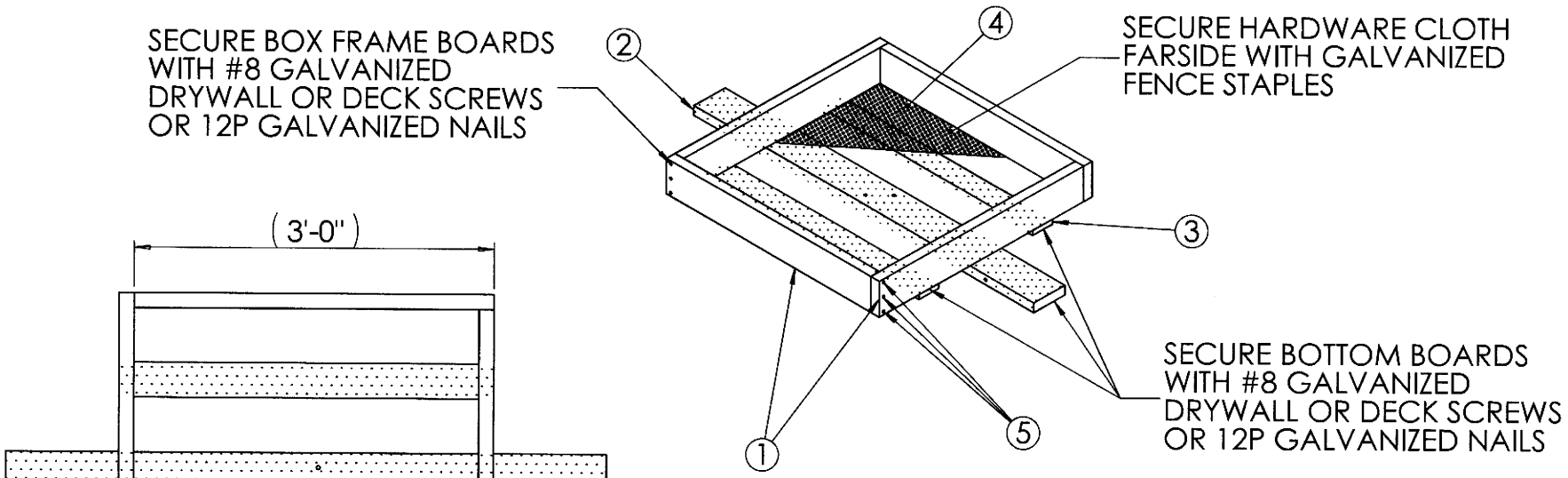
When your platform is up, you will be assisting the survival of a very important indicator species. Don't be surprised, however, if the platform is not used right away, or within the next few years or even ever. Only ospreys know what they are looking for in a home site. Also, it is possible that other birds such as crows or vultures will use the platform as a perch. Some species such as Great Horned Owls have been known to move in after a nest is established. Again, there are no guarantees, but if ospreys should choose to use the platform you provide, you will enjoy the presence of this magnificent raptor.

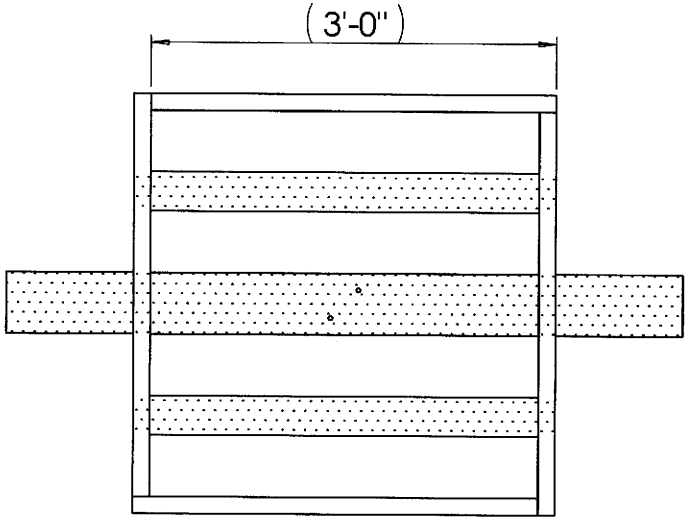


ITEM NO.	PART NUMBER	QTY.
1	Nest Box	1
	HARDWARE CLOTH	1
	DECK OR DRYWALL SCREWS	26
	2x6x36	4
	2x6x60	1
	5/4 X 6 RIPPED	2
2	6x6x16	1
3	3/8-16 X 8.0 CARRIAGE BOLT	2
4	3/8-16 X 6.0 LAG BOLT	2
5	3/8 FLAT WASHER	4
6	3/8-16 HEX NUT	2
7	2x6x96	2

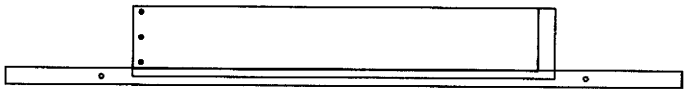
CITIZENS UNITED TO PROTECT THE MAURICE RIVER AND IT'S TRIBUTARIES

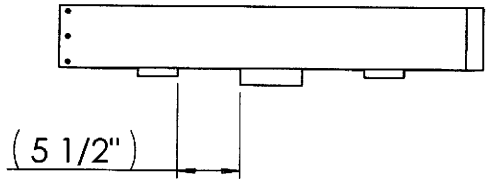
OSPREY'S NESTING PLATFORM





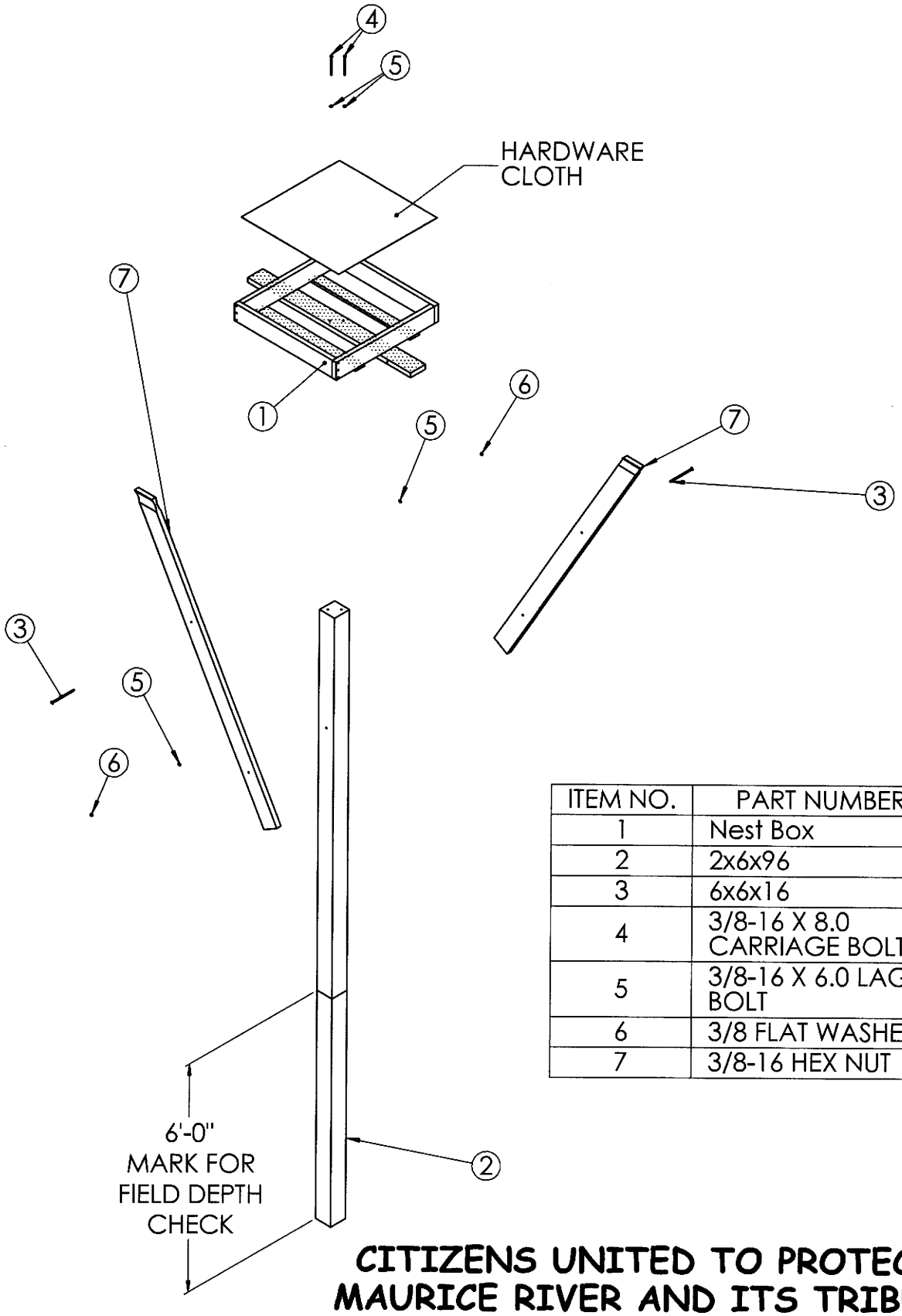
ITEM NO.	PART NUMBER	QTY.
1	2x6x36	4
2	2x6x60	1
3	5/4 X 6 RIPPED	2
4	HARDWARE CLOTH	1
5	DECK OR DRYWALL SCREWS	26





CITIZENS UNITED TO PROTECT THE MAURICE RIVER AND ITS TRIBUTARIES

OSPREYS NEST BOX DETAIL



ITEM NO.	PART NUMBER	QTY.
1	Nest Box	1
2	2x6x96	2
3	6x6x16	1
4	3/8-16 X 8.0 CARRIAGE BOLT	2
5	3/8-16 X 6.0 LAG BOLT	2
6	3/8 FLAT WASHER	4
7	3/8-16 HEX NUT	2

CITIZENS UNITED TO PROTECT THE MAURICE RIVER AND ITS TRIBUTARIES

OSPREYS NESTING PLATFORM ASSEMBLY DETAIL

Alternaive 3

Non-lead hunting amunition

Updated July 28, 2009

BLACK HILLS AMMUNITION, INC.
PO Box 3090
Rapid City, SD 57709-3090

Phone: 605-348-3090
Website: www.black-hills.com

Cartridge Designation	Caliber(s)	Grain(s)	% lead content by weight	Unique Identifying Characteristics
223 Remington**	.223	36	< 1%	Copper jacket, compressed powder core, open tip
223 Remington**	.223	55	< 1%	Copper jacket, compressed powder core, open tip with cannelure
223 Remington	.223	55	< 1%	Barnes TSX projectile; solid copper, open tip
22-250 Remington**	.223	36	< 1%	Copper jacket, compressed powder core, open tip
243 Winchester**	.243	62	< 1%	Copper jacket, compressed powder core, open tip
243 Winchester	.243	85	< 1%	Barnes TSX projectile; solid copper, open tip
25-06 Remington	.25	100	< 1%	Barnes TSX projectile; solid copper, open tip
270 Winchester	.277	130	< 1%	Barnes TSX projectile; solid copper, open tip
308 Winchester	.308	168	< 1%	Barnes TSX projectile; solid copper, open tip
30-06 Springfield	.308	180	< 1%	Barnes TSX projectile; solid copper, open tip
7 mm Remington Mag.	.284	140	< 1%	Barnes TSX projectile; solid copper, open tip
300 Winchester Mag.	.308	180	< 1%	Barnes TSX projectile; solid copper, open tip

** certified for use on appropriate non-game species only.

NON-LEAD AMMUNITION SOURCES

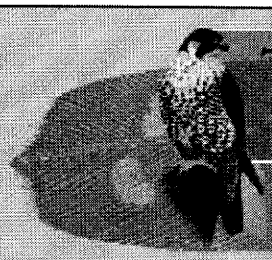
Brand Name	Caliber	Type	Wt.	Price
Black Hills Gold	25-06 Remington	Barnes X-bullet	100 gr.	$ 31.99
	270 Winchester	Barnes XLC	130 gr.	$ 31.99
	7mm Remington Magnum	Barnes X-bullet	140 gr.	$ 39.99
	308 Winchester	Barnes XLC	168 gr.	$ 28.99
	30-06 Springfield	Barnes XLC	180 gr.	$ 31.99
Federal Premium	30-06 Springfield	Barnes triple shock X	180 gr.	$ 29.89
	300 Win. Magnum	Barnes XLC	180 gr.	$ 38.49
	300 Win. Short Magnum	Barnes triple shock X	180 gr.	
	338 Win. Magnum	Barnes XLC	225 gr	$ 47.75
	7 mm Remington Magnum	Barnes triple shock X	160 gr.	$ 34.98
	7 mm Win. Short Magnum	Barnes triple shock X	160 gr	
	270 Winchester	Barnes triple shock X	130 gr.	$ 29.93
	270 Win. Short Magnum	Barnes triple shock X	130 gr.	
	308 Winchester	Barnes triple shock X	150 gr.	$ 30.15
	308 Winchester	Barnes XLC	150 gr	$ 30.15
	25-06 Remington	Barnes XLC	100 gr.	$ 28.49
PMC	270 Winchester	Barnes X-bullet	130 gr.	$ 17.47
	270 Winchester	Barnes X-bullet	150 gr.	$ 17.47
	30-06 Springfield	Barnes X-bullet	150 gr.	$ 17.77
	30-06 Springfield	Barnes X-bullet	165 gr.	$ 17.77
	30-06 Springfield	Barnes X-bullet	180 gr.	$ 17.77
	308 Winchester	Barnes X-bullet	150 gr.	$ 17.77
	7mm Remington Magnum	Barnes X-bullet	140 gr.	$ 21.18
	7mm Remington Magnum	Barnes X-bullet	160 gr.	$ 21.18
Weatherby Premium	240 Weatherby Magnum	Barnes X-bullet	90 gr.	$ 51.49
	257 Weatherby Magnum	Barnes X-bullet	115 gr.	$ 46.55
	270 Weatherby Magnum	Barnes X-bullet	140 gr.	$ 46.55
	300 Weatherby Magnum	Barnes X-bullet	180 gr.	$ 46.55
	7mm Weatherby Magnum	Barnes X-bullet	150 gr.	$ 46.55
Winchester Supreme	270 Winchester	Fail Safe Cartridges	140 gr.	$ 25.67
	300 Winchester Magnum	Fail Safe Cartridges	165 gr.	$ 32.98
	300 Winchester	Fail Safe Cartridges	150 gr.	$ 32.98
	308 Winchester	Fail Safe Cartridges	150 gr.	$ 25.67
	338 Winchester Magnum	Fail Safe Cartridges	230 gr.	$ 36.28
	7mm-08 Remington	Fail Safe Cartridges	140 gr.	$ 25.67
	7mm Remington	Fail Safe Cartridges	160 gr.	$ 29.51
	7mm Remington Magnum	Fail Safe Cartridges	140 gr.	$ 29.51
	7mm Winchester Short Magnum	Fail Safe Cartridges	160 gr.	$ 29.51
	7mm STW	Fail Safe Cartridges	160 gr.	$ 34.94

NOTE- When purchasing factory loaded ammunition, look for the letters XS, XLC or Barnes triple shock X after the size and caliber. For example, Federal Premium offers a non-toxic load for a .308 rifle, the 150 Grain XLS

Most of these prices were obtained from online Web sites and vary in price by approximately $5 in either direction.

Online Web sites to consider:

Natchez Shooter's Supply: http://www.natchezss.com
Midway USA: http://www.midwayusa.com
Cheaper than Dirt: http://www.cheaperthandirt.com
Barnes Bullets: http://www.barnesbullets.com
Cabelas: http://www.cabelas.com
Bass-Pro: http://www.basspro-shops.com
Outdoor Superstore: http://www.outdoorsuperstore.com
Wholesale Hunter: http://www.wholesalehunter.com



THE PEREGRINE FUND
WORLD CENTER FOR BIRDS OF PREY

Working to Conserve Birds of Prey in Nature

Ingestion of Lead from Spent Ammunition: Implications for Wildlife and Humans

Please read The Peregrine Fund's official position statement on lead ammunition (PDF file)

A Brief Summary of Lead

Lead is a poisonous metal present in a variety of commercial products, as a pollutant from industrial activities, and as an environmental contaminant in many urban and rural habitats throughout the world. When ingested or inhaled, the body "mistakes" lead for calcium and other beneficial metals, and thus transports lead into nerve cells and other vital tissues.

Mankind has long known about lead as an agent of sickness and death, but medical studies published in the last five to ten years are showing harmful effects at unexpectedly low levels of exposure. There are permanent adverse impacts upon cognitive function and growth in children with histories of blood levels averaging less than one-tenth of one microgram per gram—a level formerly considered benign.

Scientific evidence of the effects of lead on human health has brought forth large scale restrictions on its use in the United States, including the prohibition of lead in many gasolines and paints. Responses on behalf of wildlife have been less forthcoming, but consumption of lead shot by ducks and geese and secondary poisoning of Bald Eagles contributed to the 1991 ban on lead shot for waterfowl hunting in the United States. Other countries have instituted similar measures.

— See the complete preface for references and citations

Non-Lead Ammunition Resources

huntingwithnonlead.org

Article: History and success of non-lead bullets

Copper vs. lead bullet comparison videos (YouTube): Part 1 • Part 2 • Part 3

Bullet testing in ballistic gelatin and fragmentation barrel (YouTube)

Loading data, high-speed video and FAQs from Barnes Bullets

GMX gilding metal bullet information from Hornady

Remington press release for Copper Solid bullet

Sellier & Bellot press release for eXergy bullet (PDF)

Winchester press release for E-Tip cartridges

Sources of non-lead ammunition

- Barnes Bullets
- Black Hills Ammunition
- Conley Precision Cartridge
- Dynamic Research Technologies
- Estate Cartridge
- Federal Premium
- Fiocchi
- Hevi-Shot
- Hornady
- Kent Cartridge
- Knight Muzzleloaders
- Nosler
- PMC Ammunition
- PMP Ammunition
- Remington
- Safari Ammunition
- Sellier and Bellot
- Stars and Stripes Ammunition
- Weatherby
- Superior Ammunition
- Winchester

If you know of a source of non-lead ammunition that is not in

About the 2008 conference

Conference web site

Download the research papers or
Buy the book

the list above, please tell us so we can add it

Misc. lead information

USGS "Lead Poisoning in Wild Birds" (PDF)

Lead and Human Health Questions

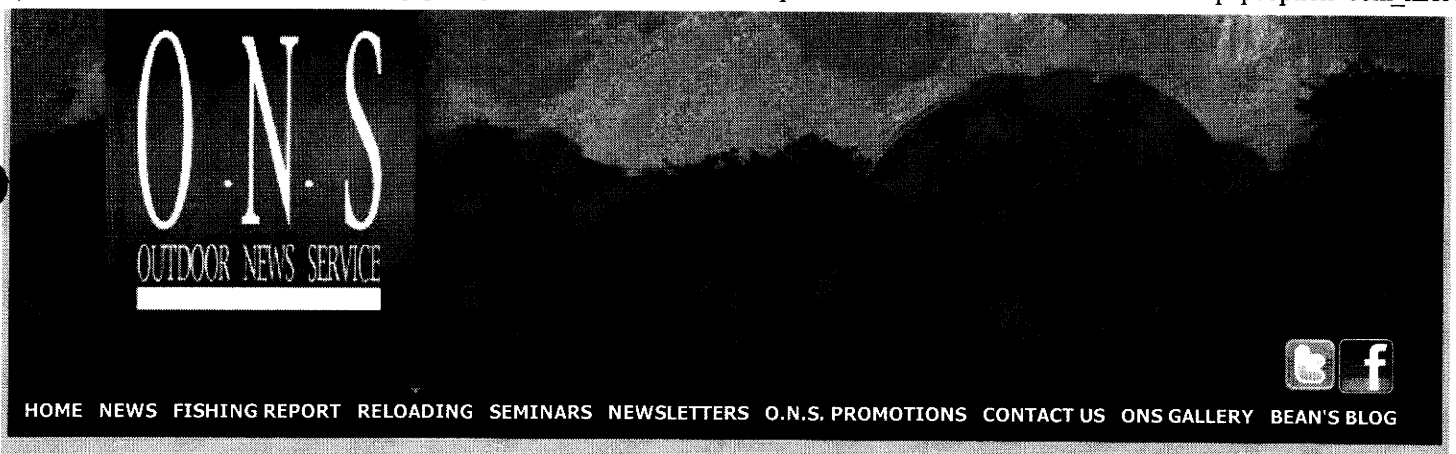
View the list of resources HERE.

Other links:

- 2010 information from Pinnacles National Park

5668 West Flying Hawk Lane · Boise Idaho · 83709
United States of America
Ph. 208-362-3716, Fax 208-362-2376
Interpretive Center 208-362-8687
E-mail: tpf@peregrinefund.org

Combined Federal Campaign #10639

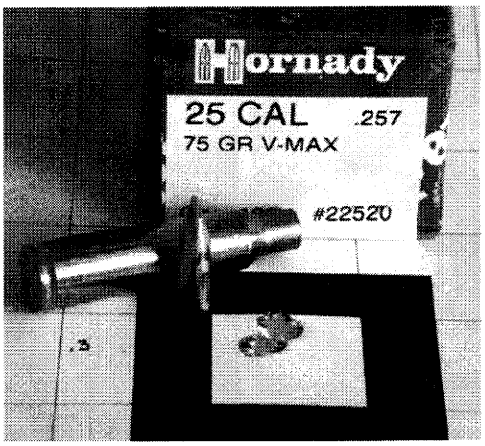

O·N·S
OUTDOOR NEWS SERVICE

Sunday, 03 April 2011 01:13

NON-LEAD VARMINT BULLET LINES ARE GROWING QUICKLY

Print E-mail

Hunter demand for non-lead varmint bullets, mostly driven by the bans on lead slugs within the range of California condors here in California, has resulted in rapid growth in this bullet category. When the ban went into affect just a little over two years ago, there was really only one .224-inch varmint bullet available on the market – the 36-grain Barnes Varmint Grenade.



Today you can buy non-lead varmint bullets from Barnes, Nosler, and Hornady, and these highly frangible slugs are available in five of the most popular calibers -- .204, .224, .243, 277, and .308-inch diameters, cover most of the popular varmint calibers along with making AR-style rifle varmint hunters who are shooting .308 Winchesters or 6.8 SPCs happy, too.

Barnes has been making copper bullets long before California' lead ban in condor range, and their big game slugs developed a reputation as one of the best hunting bullets on the market, expanding reliably and penetrating deeply.

Jessica Brooks at Barnes said the Varmint Grenade was really an offshoot of a military project where the government wanted a bullet with a set of characteristics right in line with what California varmint hunters needed: lead free and very explosive. The bullet consists of a powdered metal (copper) core in a copper jacket. Because copper is lighter than lead, all non-lead bullets are lighter for equivalent bullet lengths and configurations, so they can be driven much faster. The .224-inch, 36-grain bullet can be pushed to 3,800 fps out of a .223 Remington and at around 4,500 fps out of a .22-250. Barnes now makes Grenades in a 26-grain, 20 caliber for the .204 Ruger, a 30-grain, 224-inch bullet designed for the .22 Hornet (but providing impressive results out of my .223), a 50-grain, .224-inch bullet, and a 62-grain, .243-inch slug. The MPG line utilizes the same technology as the Varmint Grenade and they make excellent varmint slugs, even thought they might have been designed with military and tactical uses in mind. They come in a 55-grain, .224-inch bullet, an 85-grain, .277-inch (6.8mm) bullet, and .308-inch bullets in 108 and 150 grains. I'm betting you can easily get 3,700 fps with that 85-grainer out of your .270 Winchester.

Description:
June 10, 2011 - Jen Wolf landed this Crowley Lake rainbow trout while fishing with Sierra Drifters guide Doug Dolan. The fish took Wolf into the backing before being landed and released.

Hornady is the newest entrant into the non-lead line of bullets, introducing its big game GMX bullets and its varmint NTX lines within the last two years. The company has also added its flexible-tip technology, allowing pointed bullets to be used in lever guns, with a new line of monolithic bullets in its MonoFlex line this year. Varmint hunters, however, are most interested in the .204-inch, 30 grain and .224-inch, 35-grain NTX bullets which have a polymer tip (like the popular Hornady V-Max).

"I think you can safely say you will start to see all of our copper lines expand," said Everett Deger of Hornady.

Nosler has also jumped into the non-lead market with both feet with its E-Tip lead free big game bullets three years ago and its Ballistic Tip Lead-Free varmint bullets came out in 2009. The varmint slugs are now available in 35-grain and 40-grain .224 bullets, a 32-grain, .204 bullet, and a 55-grain, .243 slug.

"They're selling nationally really well, and of course in California," said Justin Moore of Nosler about the new lead free varmint bullet. "It's pretty volatile. When it hits something, it's just gone."

Deger said the Hornady NTX varmint was designed to "expand rapidly and vaporize when impacting something more dense than air."

While they might be required in a large area of California, all the non-lead varmint bullets are gaining a reputation for their lethality on game. One engineer, after seeing the high speed footage of one of these slugs exploding into a burst of tiny pieces called the framents "the poppy seeds of death."

As with all bullets, some seem to shoot better in one rifle than another, but these non-lead varmint slugs are shooting at least as well as their leaded counterparts and with the growth of the product lines, varmint hunters are more likely to find as least one bullet that shoots tiny groups in their gun.

Last modified on Monday, 11 April 2011 06:08

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SHOTGUN AMMUNITION

Shotgun Ammunition - Shells, Buckshot & Slugs

Choose high-quality shotgun ammunition, shotgun shells and shotgun slugs for delivering superior accuracy and downrange performance. To enhance your shooting experience, take a look at some of our shooting accessories like shooting vests, shooting benches, reloading supplies and trap throwers.

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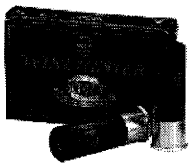

Winchester Supreme High-Velocity Buckshot
$8.99 - $12.99

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Estate SuperSport Target Shotshells
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$74.99 - $124.99
$54.99 - $109.99

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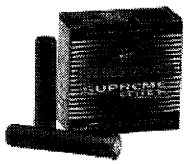
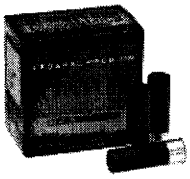


Winchester PDX1 Personal-Defense Shotshells
$13.99 - $15.99

☐ COMPARE



Federal Premium Black Cloud™ Steel - Per 10 Boxes
Bargain Cave
Select items on sale!
$169.95 - $299.95
$159.99 - $279.99

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Winchester Xpert Steel Game & Target Shotshells - Per Case
$64.99 - $139.99

☐ COMPARE

Estate 12-Ga. Buckshot – Per Box
$18.99

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Estate Upland Hunting Shotshells - Per Case
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$69.99 - $94.99
$64.99 - $69.99

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Kent Fasteel® Precision Steel Shot Shells - Per Case
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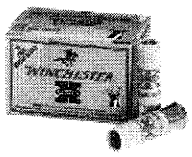

Winchester 15-Round Value-Pack Slugs
$12.99 - $14.99

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Remington® Premier AccuTip Sabot Slugs
Bargain Cave
Select items on sale!
$13.99 - $19.99
$13.99 - $14.99

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Federal® Premium Buckshot
Select items on sale!
$6.99 - $9.99
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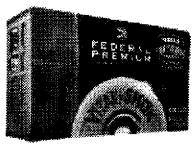

Federal® Trubail™ Rifled Slugs
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$4.99
$4.49

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Remington® BuckHammer™ Slugs
Bargain Cave
Sale!
$13.49
$6.99

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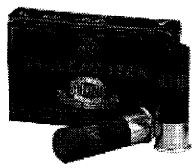

Winchester Supreme Double X® Magnum Buckshot
$7.99 - $8.99

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Winchester® WinLite™ Target Loads
$99.99

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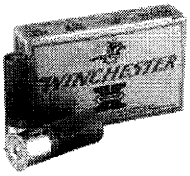

Winchester Super-X Buckshot Shotshells
$4.99 - $12.99

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Winchester Super-X® Power Point Rifled Slugs
$4.99

☐ COMPARE

Remington® Slugger Managed Recoil Rifled Slug
$4.99

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CLOSEOUT!

Sellier & Bellot Buckshot Ammunition
Bargain Cave
Sale!
$21.99
$17.88

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Estate Buckshot – Per 10 Box Case
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Sale!
$169.99
$154.99

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Winchester .410 3" 000 Buckshot with Dry-Storage Box
$134.99 - $259.99

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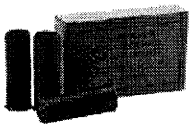

Winchester® Military-Grade Buckshot with Dry-Storage Box
$249.99

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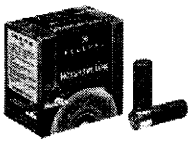
Winchester .410 2-1/2" 000 Buckshot with Dry-Storage Box
$114.99 - $209.99

☐ COMPARE

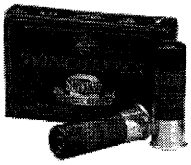
Winchester Xpert Hi-Velocity Steel Shotshells – Per 10-Box Case
$99.99 - $169.99

☐ COMPARE



NEW! **Federal**

Federal Premium



Winchester

Speed-Shok Steel Shotshells
$109.99 - $189.99
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Prairie Storm™ - Per Case
$182.99 - $209.99
☐ COMPARE

Supreme Partition Gold Slugs
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Sale!
$17.49 - $21.99
$13.99 - $15.99
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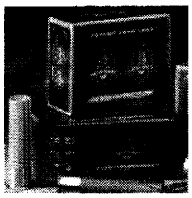
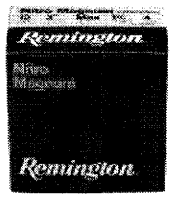
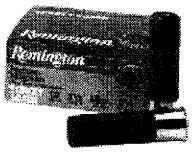


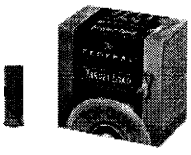
Hevi-Shot® Duck Shotshells – Per Box
$23.99 - $28.99
☐ COMPARE



Remington Nitro Mag® Lead Shotshells
$22.99 - $31.99
☐ COMPARE



Remington® Premier® Magnum Copper-Plated Turkey Loads
$10.99 - $18.99
☐ COMPARE



NEW! **Federal Top Gun Pink Target Loads - Per Case**
Bargain Cave
Sale!
$64.99
$59.99
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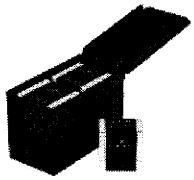

NEW! **FEDERAL 12GA BUCKSHOT PER 175 W/AMMO CAN**
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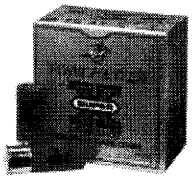

Winchester Super-X® High Brass Game Loads - Per Case
$139.99 - $184.99
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CABELA'S 50TH

NEW! **Cabela's 50th Anniversary Federal Field & Target Shotshells – Per Case**
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$59.99
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Fiocchi Golden Pheasant Ammunition - Per 10 Boxes
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$139.99 - $179.99
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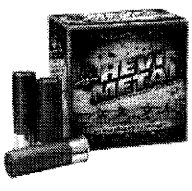
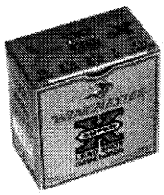
MAIL-IN REBATE

Federal Gold Medal Paper Target Shotshells - Per Case
Bargain Cave
Sale!
$109.99
$89.99 - $99.99
☐ COMPARE

Kent Ultimate Fast Lead™ Shotshells - Per Case
Bargain Cave
Select items on sale!



Hevi-Metal® Shotgun Shells – Per Case
$229.99 - $269.99



Winchester Super-X Game Loads – Per 10 Boxes
$64.99 - $109.99

$109.99 - $159.99
$109.99 - $159.99

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Div. of Oil, Gas & Mining

Exhibit 9

Seep and Spring Survey

Rock Logic Consulting LLC
Rock Logic Consulting
PO Box 544 • Cedaredge, CO 81413
Phone: (435) 851-9044 • rocklogicconsulting@gmail.com
Brad Lindsay • Consulting Geologist

Memorandum

Date: 20 December 2006
To: Greg Hunt – Carbon Resources
From: Brad Lindsay
Subject: Spring and Seep Survey - June 2006

Summary

A spring and seep survey was conducted for Carbon Resources June 5th through June 9th 2006. Brad Lindsay conducted an extensive field survey within the area of interest outlined by Greg Hunt. Springs were observed and recorded in the field by traversing the property. Springs were identified in UP Canyon, Eagle Canyon, Long Canyon, Merrill Canyon, and Jump Creek. A 1/8-mile radius was traversed around drill hole locations listed in Carbon Resources Minor Coal Exploration Plan December 22, 2005. CR-06-04 was the only drill hole location with a spring within the 1/8-mile radius.

Methods

Area of interest survey - Greg Hunt outlined a large area of interest. The area was traversed by 4-wheeler and by hiking. Large dry slopes were observed from a distance. Areas that are more likely to have springs (such as down-dip slopes, heavily wooded areas, and canyon bottoms) were covered with a tighter traverse. Indications of existing or previously existing water were watched for. Indications include changes in vegetation, soil erosion, and desiccation cracks. When springs were located they were described, photographed, and coordinates taken. Flows were estimated for each spring.

Drill hole survey - A 1/8-mile radius was walked around each drill hole. Areas within the circle that could not be observed while walking the radius were traversed. Distances were measured using a handheld GPS unit. Evidence of springs was recorded as described above. Eagle Seep 3 was the only spring or seep found within a 1/8-mile radius of a drill hole location.

Observations

Springs were identified in five main locations: UP Canyon, Eagle Canyon, Long Canyon, Merrill Canyon, and Jump Creek. Findings at each of these locations are discussed below. Please refer to the attached map for exact locations. A track identifying the traverse path is also included on the map. Photographs of the springs are attached.

UP Canyon and near highway 96

Sulfur Spring – is located just east of highway 96 approximately 1 mile north of Scofield. The spring runs year round at an average rate of approximately 80 gpm. The spring flows through a culvert under the highway and west into a field.

Miller Spring – is approximately 1 ¼ mile north of sulfur spring east of highway 96. It is slightly north of the area of interest. A wooden fence surrounds the springhead. The spring only flows in the springtime. Estimated flow at the time of the survey is approximately 1 gpm.

UP Spring – is located east of the dirt road up the south fork of UP Canyon. The spring was not flowing, but water was ponded in a low area.

Two dry ponds and one full pond were identified near the end of the road up the south fork of UP Canyon. One dry pond was located near the end of the road up the east fork of UP Canyon.

Eagle Canyon

Angle Spring – is located at the north end of Eagle Canyon where it bends to the west. The spring is piped out of the ground into several metal stock tanks. The spring flows year round at an average rate of approximately ½ gpm.

Eagle Seep 1 & Eagle Seep 1A – these seeps are located near the valley bottom. They appear to flow into a stock pond immediately down hill and north. There is some old piping around the seeps and the stock pond. The flow from the seeps is estimated to be less than ½ gpm.

Eagle Spring 2 – is located north of Seep 1 and 1A in the valley bottom. A springhead was not located. A large stock pond was observed to be full all summer long. It is assumed that the spring feeds the pond from its bottom somewhere. The flow was not estimated.

Eagle Seep 3 – is located approximately 400 feet northeast downhill of proposed drill hole CR-06-04. The seep has an estimated flow of less than ½ gpm.

There is a dry trough and some piping directly north of an old corral in the bottom of the valley east of proposed drill hole CR-06-04. It appears that there may have been a spring at that location at one time.

Long Canyon

An effluent stream flows down Long Canyon fed by visible springs and seeps. The springs and seeps along with current beaver ponds have been mapped.

LC Seep 1 & 2 – are located at the north (downstream) end of Long Canyon. These seeps are north of the area of interest.

LC Seep 3 – is located approximately 1 mile south of LC Seep 1 &2.

LC Spring 1 – is near LC Seep 3. It is located on the west side of the stream. The estimated flow is approximately 10 gpm.

LC Spring 2 – is near LC Spring 1. It is located on the east side of the stream. The estimated flow is approximately 1/2 gpm.

LC Spring 3 – is south of LC Spring 1 & 2. It is located on the west side of the stream. The estimated flow is approximately 3 gpm.

LC Spring 4 – is part way up a small drainage along the west side of the canyon. The estimated flow is less than ½ gpm.

LC Spring 5 & 5A – are located in the canyon bottom at the east-west fence line that runs along the township 12 and township 13 boundary. Each spring has an estimated flow of approximately 5 gpm.

LC Spring 6 – is located in the west split of Long Canyon. The estimated flow is approximately 10 gpm.

LC Spring 7 – is located in a drainage along the west side of the west split of Long Canyon. It feeds a small stock pond. The estimated flow is approximately 7 gpm.

LC Spring 8 – is located in the east split of Long Canyon. It flows out of a steep cut bank west of the stream. The estimated flow is approximately 20 gpm.

Merrill Canyon

Merrill Canyon branches off approximately 1 mile south of the mouth of Long Canyon. It runs southeast toward Jump Creek. A small stream flows from Merrill Canyon into the stream in Long Canyon. At the time of this field survey, the majority of the water flowing from Merrill Canyon appeared to originate from springs in the canyon.

Merrill Spring 1 – is located at the canyon bottom up near the southeast end of the canyon. The estimated flow is approximately 10 gpm.

Luis Spring – is located on the south edge of the stream. The estimated flow is approximately 10-15 gpm.

Guzman Spring – is immediately west. The estimated flow is approximately 1/2 gpm.

Merrill Spring 2 – is north down the canyon. It is also located on the south side of the canyon. The estimated flow is approximately 10 gpm.

Merrill Spring 4, 5 & 5A, & 6 – are located in a small canyon that extends south from Merrill Canyon. Merrill Spring 4 is at the south (upstream) end of the canyon. It has an estimated flow of approximately 5 gpm. Merrill springs 5 and 5A are near the middle of the offshoot canyon. There is some 1" pvc piping protruding from the ground here. The springs have an estimated combined flow of approximately 10 gpm. Merrill spring 6 is located near the mouth of the offshoot canyon. It feeds a small pond. The estimated flow is less than 1 gpm.

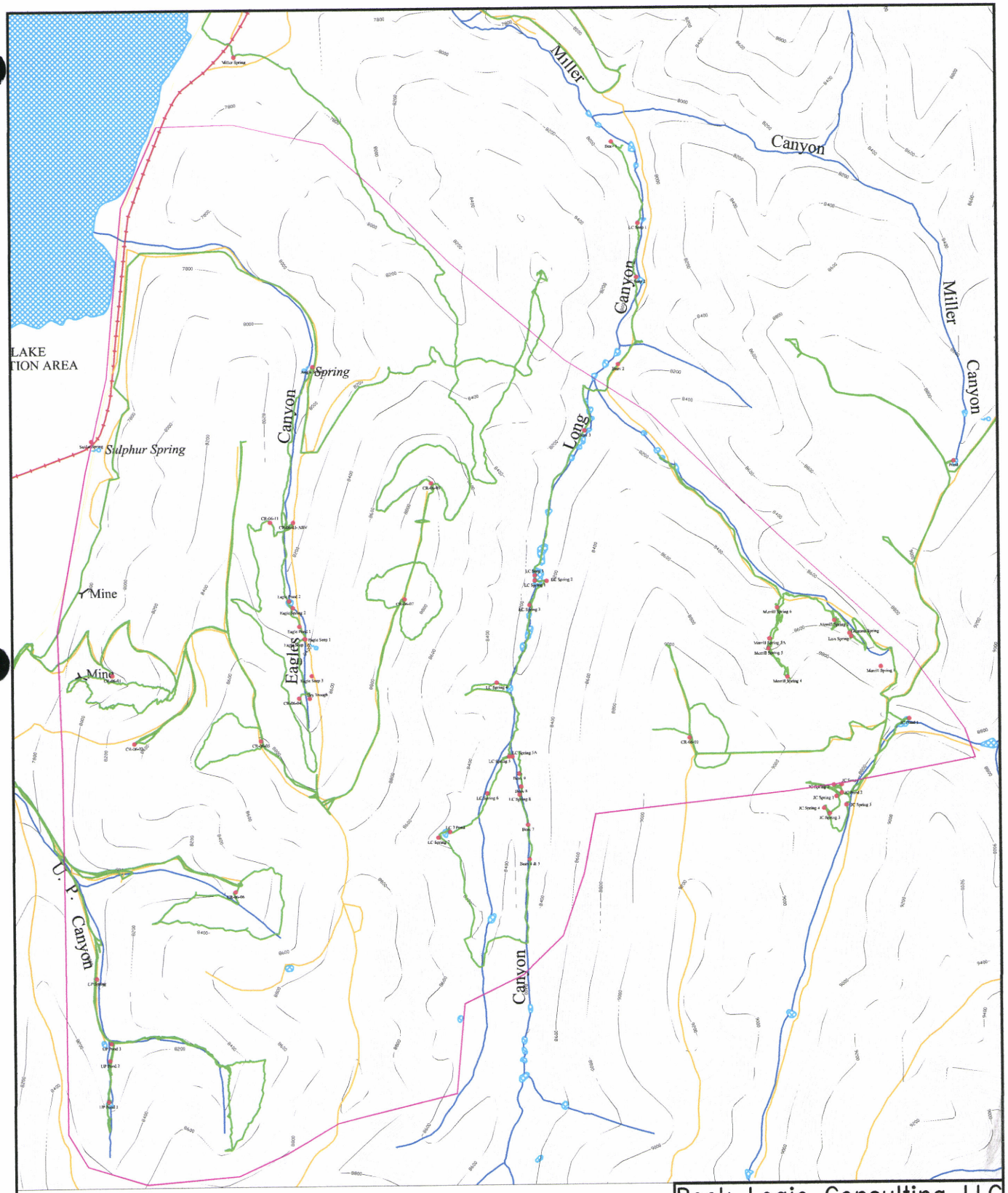
Jump Creek

Several springs were identified just south of the area of interest near Jump Creek. There is a spring fed stock pond in the area. There is also a second pond down the canyon that is fed by Jump Creek.

JC Spring 1 – is south of the pond and flows into Jump Creek. It has an estimated flow of approximately 10 gpm.

JC Spring 2 – is located northwest and feeds into the stock pond. It has an estimated flow of approximately 5 gpm.

JC Springs 3, 4, & 5 – are all located south of the stock pond and flow into Jump Creek. They each have estimated flows of less than 1 gpm.



KEY

Angle Spring — Spring, Seep, or Pond Location

Area of Interest Boundary

Survey Traverse Track

Refer to Map 7
(Regional Hydrology)

Scale 1 = 2,200

Drawing Loc: Spring and Seep Survey\GPS Data in KCS.dwg

Rock Logic Consulting LLC

Carbon Resources LLC
Spring and Seep Survey
June 2006

DWG	BWL & ER
CKD	
APD	

DATE: 6/28/06

Miller Spring

UP Spring

UP Pond 1

Angle Spring

Eagle Seep 1

Eagle Spring 2 and Pond

Eagle Seep 3

LC Spring 1

LC Spring 2

LC Spring 3

LC Spring 4

LC Spring 5A

LC Spring 5A

LC Spring 5

LC Spring 6

LC Spring 7

LC Spring 8

Merrill Spring 1

Luis Spring

Guzman Spring

Merrill Spring 4

Merrill Spring 5

JC Pond 1

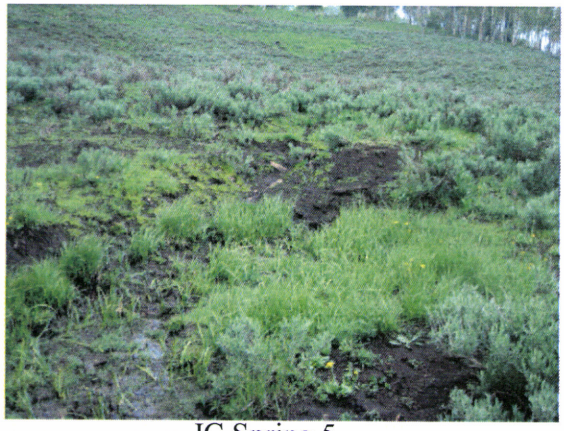
JC Spring 1

JC Spring 2

JC Pond 2

JC Spring 3

JC Spring 4



JC Spring 5

Exhibit 10

Surface and Ground Water Field Measurements

Carbon Resources LLC

Kinney II Baseline Water Sampling

Surface Water Field Measurements

Miller Outlet *

Elevation: ~7,632

Revised Feb. 2011

Date	Estimated Flow (gpm)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
5/11/2005	59	8.1	6.9	474	10.4
9/6/2005	18	8.0	4.6	433	13.1
10/31/2005	134	6.9	7.2	440	4.8
11/28/2005	frozen	5.7	8.0	556	1.7
12/22/2005	frozen	6.1	6.8	435	4.2
1/22/2006	frozen	6.0	7.1	440	1.2
2/26/2006	frozen		4.6	320	14.0
3/27/2006	frozen	**8.1**		**550**	~1.0
4/26/2006	545	8.0	3.6	369	19.2
5/25/2006	266	8.5	4.0	408	30.2
6/29/2006	171	8.6	4.2	415	28.6
7/31/2006	103	8.4	4.4	326	27.6
8/20/2006	89	8.6	4.6	110	27.7
9/7/2006	122	lab	7.4	375	13.0
10/30/2006	182	8.3	8.5	285	13.0
11/27/2006	frozen	8.0	5.1	327	10.0
12/26/2006	frozen	8.1	7.2	428	8.4
1/31/2007	frozen	8.0	5.3	387	8.6
2/19/2007	frozen	8.1	7.0	354	8.0
3/29/2007	212	8.7	9.9	440	13.3
4/25/2007	156	8.5	6.7	436	23.4
5/29/2007	142	8.4	7.9	417	22.9
6/25/2006	35	8.1	4.7	508	31.0
7/30/2007	36	8.5	4.9	362	27.7
3/25/2008	23	7.8	5.0	633	17.5
6/16/2008	289	8.7		377	30.4
8/26/2008	66	8.3	3.9	456	29.6
10/29/2008	85	8.4	9.6	434	12.3
6/23/2010	43	*12.0*	*22.9*	283	16.5
9/28/2010	25	8.7		480	12.5
12/1/2010	frozen	7.5		617	0.1
2/24/2011	frozen	No Measurement			

NOTE: Bolded values measured in March 2006 were analyzed at the laboratory. Specific conductivity values were actually measured as conductivity.

*Miller Outlet was initially misnamed "Eagle Outlet" and was once misnamed "Eagle Outlook". Samples collected from may 2005 to may 2006 were mislabeled "Eagle Outlet" or "Eagle Outlook" and analytic data are labeled accordingly. From June 2006 to present the data are labeled as Miller Outlet. Data labeled Miller Outlet, Eagle Outlet, & Eagle Outlook represent samples collected at the same location.

Italicized Values are SUSPECT

Carbon Resources LLC

Kinney II Baseline Water Sampling
Surface Water Field Measurements

Mud Creek *

Elevation: ~7,685

Revised Feb. 2011

Date	~CFS	Estimated ** Flow (gpm)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
5/11/2005	50	22,442	8.31	7.4	694	10.0
9/6/2005	11	4,937	8.51	5.4	655	17.7
10/31/2005	14	6,284	6.68	6.4	759	10.7
11/29/2005	13	5,835	6.94	7.2	758	5.6
12/22/2005	12	5,386	6.67	6.2	520	13.6
1/22/2006	13	5,835	8.63	4.1	568	7.6
2/26/2006	12	5,386	9.00	3.6	501	19.3
3/27/2006	12	5,386	**8.18**		**1000**	~2.0
4/26/2006	37	16,607	8.30	5	394	18.5
5/25/2006	131	58,797	8.45	4.4	324	26.5
6/29/2006	26	11,670		6.2	581	28.5
7/31/2006	15	6,732	8.40	4.8	471	26.9
8/20/2006	14	6,284	8.38	5.1	188	27.7
9/7/2006	15	6,732	lab	6.1	564	14.3
10/30/2006	16	7,181	7.94	6.9	424	17.3
11/27/2006	16	7,181	7.76	6	463	12.0
12/26/2006	15	6,732	8.08	7.3	571	13.1
1/31/2007	16	7,181	7.40	5.5	834	12.4
2/19/2007	15	6,732	8.30	6.8	476	12.4
3/29/2007	19	8,528	8.33	7.9	555	13.4
4/25/2007	19	8,528	8.29	7.8	546	25.0
5/29/2007	26	11,670	8.51	7.9	481	20.7
6/25/2006	16	7,181	8.65	5.7	742	27.7
7/30/2007	14	6,284	8.58	5.3	532	25.5
3/25/2008	9	4,129	7.80	5.0	633	17.5
6/16/2008	85	38,151	8.93	4.7	355	23.8
8/26/2008	15	6,732	8.31	3.9	651	28.6
10/29/2008	14	6,284	8.93	11.4	667	15.9
6/23/2010	17	7,630	*9.29*	*3.4*	289	24.6
9/28/2010	11	4,937	8.90		732	11.4
12/1/2010	12	5,386	7.62		741	6.8
2/24/2011			7.84		744	4.8

NOTE: Bolded values measured in March 2006 were analyzed at the laboratory. Specific conductivity values were actually measured as conductivity.

*The sample collected at Mud Creek in May 2005 was mislabeled "Muddy Creek" and analytic data are labeled accordingly. Data labeled Mud Creek & Muddy Creek represent samples collected at the same location.

** Flow Data From USGS 09310700 MUD CRK BL WINTER QUARTERS CYN @ SCOFIELD, UT From Web Site http://waterdata.usgs.gov/nwis/dv/?site_no=09310700&agency_cd=USGS&referred_module=sw

Italicized Values are SUSPECT

Carbon Resources LLC

Kinney II Baseline Water Sampling
Surface Water Field Measurements
Res-1 (Scofield Reservoir) *

Elevation: **~7,620**

Revised Feb. 2011

Date	Water Level (feet)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
5/30/2006	13.5	8.09	5.6	424	20.6
6/29/2006		9.03	10	287	31.9
7/31/2006	9.4	10.16	9.1	257	29.8
8/20/2006	7.7	9.82	9	108	35.7
9/7/2006	6.0	lab	5.2	365	15.5
10/30/2006	4.5	8.13	6.7	351	18.2
11/27/2006	4.8	frozen			
12/26/2006		frozen			
1/31/2007		frozen			
2/19/2007		frozen			
3/29/2007	7.8	8.43	9.7	408	14.9
4/25/2007	7.8	8.39	7.8	390	23.4
5/29/2007	8.1	8.48	8	350	24.9
6/25/2006	5.6	10.52	7.3	360	36.1
7/30/2007	0.1	8.02	5.9	616	28.0
3/25/2008		7.14	5.3	775	12.7
6/16/2008	9.1	8.69	4.6	341	31.4
8/26/2008	2.9	8.54	7.5	743	32.1
10/29/2008	96.8	7.98	7.6	605	17.0
6/23/2010	8.2	*12*	*38.2*	261	18.7
9/28/2010	97.7	9.22		867	23.1
12/1/2010		frozen			
2/24/2011		frozen			

*The samples collected at Res-1 in June, July, & Aug 2006 were mislabeled "Scofield Res. 1" and analytic data are labeled accordingly. Data labeled Res-1 & Scofield Res. 1 represent samples collected at the same location.

Italicized Values are SUSPECT

Carbon Resources LLC

Kinney II Baseline Water Sampling
Surface Water Field Measurements

Eagles Canyon
Monay Draw
Blue Seal Draw
Kinney Draw
Columbine Draw
Jones Draw
UP Canyon

Refer to Map 7 for location of Drainages

Revised Feb. 2011

Ben Grimes visited Scofield on each of the days listed and observed an absence of rain and an absence of running water in the seven ephemeral drainages within and adjacent to the Kinney # 2 Permit Boundary.

Date	Water Level (feet)
5/26/2006	DRY
10/16/2006	DRY
10/27/2006	DRY
5/8/2007	DRY
9/20/2007	DRY
9/21/2007	DRY
10/27/2007	DRY
9/22/2009	DRY
9/23/2009	DRY
9/29/2009	DRY
9/30/2009	DRY
10/1/2009	DRY
4/26/2010	DRY
4/27/2010	DRY
7/3/2010	DRY
8/19/2010	DRY
9/7/2010	DRY
9/14/2010	DRY
9/16/2010	DRY
9/30/2010	DRY
10/20/2010	DRY

Carbon Resources LLC

Kinney II Baseline Water Sampling

Ground Water Field Measurements

CR-06-01

WL DEPTH DATUM :	Top of PVC completion string		
DEPTH DATUM ELEVATION:	7951.2		
Ground Level Elevation:	7,950.3	(Depths in blue are from Ground Level)	
WL's are measured from WL Datum, well completions from Ground Elevation.			
Screened Interval Depth:	81.9	88.9	
Screened Interval Elevation:	7868.4	7861.4	
Blank Interval Depth:	88.9	98.9	
Blank Interval Elevation:	7861.4	7851.4	
Hiawatha Seam Interval Depth:	76.9	85	
Hiawatha Seam Interval Elevation:	7873.4	7865.3	

Date	Water Level Depth from DATUM (ft)	Water Level Elevation (ft)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
	No water encountered during drilling.					
3/8/2006	Dry					
4/26/2006	Dry					
5/25/2006	Dry					
6/29/2006	Dry					
7/25/2006	Dry					
8/20/2006	Dry					
9/7/2006	Dry					
10/30/2006	Dry					
11/27/2006	Dry					
12/26/2006	97.4	7,853.8				
1/31/2007	97.5	7,853.7				
2/19/2007	97.4	7,853.8				
3/29/2007	Dry					
4/25/2007	97.6	7,853.6				
5/29/2007	97.4	7,853.8				
6/25/2007	not measured					
7/30/2007	not measured					
6/16/2008	Dry					
8/26/2008	Dry					
10/29/2008	Dry					
6/23/2010	Dry					
9/28/2010	Dry					
12/1/2010	Dry					

Note all water levels are Below the Screened Interval therefore are in the closed "blank" and do not represent a static ground water level.

Reviesed 11 Feb 2011

Carbon Resources LLC

Kinney II Baseline Water Sampling

Ground Water Field Measurements

CR-06-01-BLW

DEPTH DATUM :	Top of Fiberglass completion string		
DEPTH DATUM ELEVATION:		7951.1	
Ground Level Elevation:	7,950.3	(Depths in blue are from Ground Level)	
*Screened Interval Depth:		243.2	253.2
Screened Interval Elevation:		7707.1	7697.1
Blank Interval Elevatioin:		7697.1	7687.1
Hiawatha Seam Interval Depth:		76.9	85
Hiawatha Seam Interval Elevation:		7873.4	7865.3

Date	Water Level Depth from DATUM (ft)	Water Level Elevation (ft)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
	Water was observed in open hole with a downhole video at 210 feet and 215 feet immediatley after drilling.					
	*Screened Intervan & other completion details, plus water level inside of blank confirmed by down-hole video.					
3/8/2006	Dry					
4/26/2006	241.2	7,709.9				
4/26/2006	263.3	7,687.8	Tagged bottom of Blank			
5/25/2006	Dry					
6/29/2006	242.0	7,709.1				
7/19/2006	Dry					
8/20/2006	242.1	7,709.0				
9/7/2006	242.0	7,709.1				
10/30/2006	242.2	7,708.9				
11/27/2006	237.3	7,713.8				
12/26/2006	242.1	7,709.0				
1/31/2007	242.3	7,708.8				
2/19/2007	242.2	7,708.9				
3/29/2007	Dry					
4/25/2007	242.4	7,708.7				
5/29/2007	242.3	7,708.8				
6/25/2007	not measured					
7/30/2007	not measured					
6/16/2008	Dry					
8/26/2008	Dry					
10/29/2008	*249.0*	*7,702.1*	*V Suspect*	Depth		Elev.
6/23/2010	254.0	7,697.1	Tagged Bottom @	264.0		7687.1
9/28/2010	254.0	7,697.1	Tagged Bottom @	264.0		7687.1
12/1/2010	Dry		Tagged Bottom @	264.0		7687.1

Note: all water levels are "False Positives" where depth indicator encountered moisture near top of reducer as confirmed by downhole video; therefore, water level measurements shown here do not represent static ground water levels.

Reviesed 11 Feb 2011

Carbon Resources LLC

Kinney II Baseline Water Sampling

Ground Water Field Measurements

CR-06-02-ABV

DEPTH DATUM :	Top of PVC completion string		
DEPTH DATUM ELEVATION:		8338.7	
Ground Level Elevation:	8,336.7	(Depths in blue are from Ground Level)	
Screened Interval Depth:		288.0	298.0
Screened Interval Elevation:		8048.67	8038.67
Blank Interval Depth:		298.0	308.0
Blank Interval Elevatioin:		8,038.7	8,028.7
Hiawatha Seam Interval Depth:		428.0	437.0
Hiawatha Seam Interval Elevation:		7908.67	7899.67

Date	Water Level Depth from DATUM (ft)	Water Level Elevation (ft)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
	No water encountered during drilling.					
3/8/2006	302.8	8,035.9				
4/26/2006	309.0	8,029.7				
5/25/2006	Dry					
6/29/2006	307.2	8,031.5				
7/19/2006	303.6	8,035.1				
8/20/2006	301.7	8,037.0				
9/7/2006	301.6	8,037.1				
10/30/2006	301.7	8,037.0				
11/27/2006	301.6	8,037.1				
12/26/2006	301.6	8,037.1				
1/31/2007	301.2	8,037.5				
2/19/2007	301.8	8,036.9				
3/29/2007	301.7	8,037.0				
4/25/2007	301.8	8,036.9				
5/29/2007	301.7	8,037.0				
6/25/2007	not measured					
7/30/2007	not measured					
6/16/2008	301.6	8,038.0				
8/26/2008	301.8	8,037.8				
10/29/2008	301.8	8,037.8				
6/23/2010	301.9	8,037.7				
9/28/2010	301.9	8,037.7				
12/1/2010	301.5	8,038.1				

Note all water levels are Below the Screened Interval therefore are in the closed "blank" and do not represent a static ground water level.

Reviesed March 2011

Carbon Resources LLC

Kinney II Baseline Water Sampling

Ground Water Field Measurements

CR-06-02

DEPTH DATUM :	Top of PVC completion string		
DEPTH DATUM ELEVATION:		8,339.55	
Ground Level Elevation:	8,336.7	(Depths in blue are from Ground Level)	
Screened Interval Depth:		422.7	432.7
Screened Interval Elevation:		7,894.0	7,904.0
Blank Interval Depth:		432.72	442.72
Blank Interval Elevatioin:		7,904.0	7,894.0
Hiawatha Seam Interval Depth:		428	437
Hiawatha Seam Interval Elevation:		7908.67	7899.67

Date	Water Level Depth from DATUM (ft)	Water Level Elevation (ft)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
	No water encountered during drilling.					
3/8/2006	437.0	7,902.6				
4/26/2006	437.1	7,902.5				
*5/25/2006	*441.4*	7,898.2				
6/29/2006	438.3	7,901.3				
7/19/2006	438.1	7,901.5				
8/20/2006	438.4	7,901.2				
9/7/2006	439.0	7,900.6				
10/30/2006	437.6	7,902.0				
11/27/2006	439.3	7,900.3				
12/26/2006	439.3	7,900.3				
1/31/2007	439.7	7,899.9				
2/19/2007	439.9	7,899.7				
3/29/2007	439.3	7,900.3				
4/25/2007	439.9	7,899.7				
5/29/2007	440.1	7,899.5				
6/25/2007	not measured					
7/30/2007	not measured					
11/12/2007	442.3	7,897.3				
3/25/2008	snow covered					
6/16/2008	442.2	7,897.4				
8/26/2008	442.7	7,896.9				
10/29/2008	442.7	7,896.9				
6/23/2010	442.7	7,896.9				
9/28/2010	442.7	7,896.9				
12/1/2010	441.7	7,897.9				
3/3/2011	443.2	7,896.4				

Note all water levels are Below the Screened Interval therefore are in the closed "blank" and do not represent a static ground water level as confirmed by downhole video and multiple TD (Total Depth) soundings.

Reviesed 4 March 2011
Following Dowhole Video and TD Sounding.

Tagged bottom of Blank @ 445.6
Elev= 7,894

* Measurement on 5-25-06 is suspect

PURGE

Look on Back Side of SULFUR SPRING

Carbon Resources LLC

Kinney II Baseline Water Sampling

Ground Water Field Measurements

CR-06-03-ABV

DEPTH DATUM :	Top of Fiberglass completion string		
DEPTH DATUM ELEVATION:	8,135.97		
Ground Level Elevation:	8,132.9	(Depths in blue are from Ground Level)	
Screened Interval Depth:	480	490	
Screened Interval Elevation:	7652.86	7642.86	
Hiawatha Seam Interval Depth:	647	654	
Hiawatha Seam Interval Elevation:	7485.86	7478.86	

Date	Water Level Depth from DATUM (ft)	Water Level Elevation (ft)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
	Water encountered during drilling at ~ 380 feet. Higher flow of water during drilling at ~450 feet.					
3/6/2006	Purged approximately 600 gal of water.					
3/7/2006	Purged an additional 300 gal of water & Sampled					
4/26/2006	337.1	7,798.9	6.92	5.7	425	26.6
5/25/2006	337.8	7,798.2	7.28	1.3	599	28.3
6/29/2006	338.2	7,797.8	7.23	2.2	689	21.8
7/31/2006	337.5	7,798.5	6.87	1.1	549	23.9
8/20/2006	337.7	7,798.3	6.99	1.1	245	25.0
9/7/2006	337.8	7,798.2	>12	1.7	522	20.7
10/30/2006	not measured					
11/27/2006	not measured					
12/26/2006	not measured					
1/31/2007	not measured					
2/19/2007	not measured					
3/29/2007	not measured					
4/25/2007	not measured					
5/29/2007	not measured					
6/25/2007	not measured					
7/30/2007	not measured					

Reviesed 11 Feb 2011

Discontinued Measuring

Carbon Resources LLC

Kinney II Baseline Water Sampling

Ground Water Field Measurements

CR-06-05A

DEPTH DATUM :	Top of PVC completion string			
DEPTH DATUM ELEVATION:		8798.9		
Ground Level Elevation:	8,795.7	(Depths in blue are from Ground Level)		
Screened Interval Depth:		1036	1051	
Screened Interval Elevation:		7759.7	7744.7	
Hiawatha Seam Interval Depth:		1037	1043	
Hiawatha Seam Interval Elevation:		7758.7	7752.7	

Date	Water Level Depth from DATUM (ft)	Water Level Elevation (ft)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
9/7/2006	1051.7	7,747.2				
10/30/2006	1057.6	7,741.3				
11/27/2006	not measured					
12/26/2006	1058.0	7,740.9				
1/31/2007	1057.8	7,741.1				
2/19/2007	1057.9	7,741.0				
3/29/2007	1057.5	7,741.4				
4/25/2007	1058.1	7,740.8				
5/29/2007	1057.8	7,741.1				
6/25/2007	not measured					
7/30/2007	not measured					
6/16/2008	1057.7	7,741.2				
8/26/2008	1058.2	7,740.7				
10/29/2008	1058.4	7,740.5				
6/23/2010	1058.5	7,740.4				
9/28/2010	1057.9	7,741.0				
12/1/2010	1055.9	7,743.0				

Note all water levels except the intial measurement are below the Screened Interval therefore are in the closed "blank" and do not represent a static ground water level. The initial measurement was apparently taken before all drilling fluid had dissipated.

Reviesed 11 Feb 2011

Carbon Resources LLC

Kinney II Baseline Water Sampling

Ground Water Field Measurements

CR-06-09-ABV

DEPTH DATUM :	Top PVC of completion string			
DEPTH DATUM ELEVATION:		8843.3		
Ground Level Elevation:	8,840.8	(Depths in blue are from Ground Level)		
Screened Interval Depth:		888	898	
Screened Interval Elevation:		7952.8	7942.8	
Hiawatha Seam Interval Depth:		992.2	>1002	
Hiawatha Seam Interval Elevation:		7848.6	<7840.4	

Date	Water Level Depth from DATUM (ft)	Water Level Elevation (ft)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
9/7/2006	Not developed - WL 3 days after installation = 861.3					
10/30/2006	863.1	7,980.2				
11/27/2006	not measured					
12/26/2006	863.9	7,979.4				
1/31/2007	864.5	7,978.8				
2/19/2007	864.1	7,979.2				
3/29/2007	864.7	7,978.6				
4/25/2007	866.1	7,977.2				
5/29/2007	866.1	7,977.2				
6/25/2007	not measured					
7/30/2007	not measured					
6/16/2008	867.3	7,976.0				
8/26/2008	867.9	7,975.4				
10/29/2008	867.8	7,975.5		Reviesed 11 Feb 2011		
6/23/2010	867.9	7,975.0				
9/28/2010	868.5	7,974.4				
12/1/2010	868.3	7,974.6				

Carbon Resources LLC

Kinney II Baseline Water Sampling

Ground Water Field Measurements

CR-06-09

DEPTH DATUM :	Top of PVC completion string		
DEPTH DATUM ELEVATION:		8,843.30	
Ground Level Elevation:	8,840.8	(Depths in blue are from Ground Level)	
Screened Interval Depth:		989.5	1001.5
Screened Interval Elevation:		7851.3	7839.3
Hiawatha Seam Interval Depth:		992.2	>1002
Hiawatha Seam Interval Elevation:		7848.6	<7840.4

Date	Water Level Depth from DATUM (ft)	Water Level Elevation (ft)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
	Water encountered during drilling at ~ 380 feet. Higher flow of water during drilling at ~450 feet.					
9/7/2006	982.0	7,861.3				
10/30/2006	984.1	7,859.2				
11/27/2006	not measured					
12/26/2006	982.4	7,860.9				
1/31/2007	983.1	7,860.2				
2/19/2007	983.3	7,860.0				
3/29/2007	982.8	7,860.5				
4/25/2007	982.9	7,860.4				
5/29/2007	982.6	7,860.7				
6/25/2007	not measured					
7/30/2007	not measured					
6/16/2008	982.1	7,861.2				
8/26/2008	982.8	7,860.5				
10/29/2008	983.2	7,860.1		Reviesed 11 Feb 2011		
6/23/2010	983.1	7,859.8				
9/28/2010	983.1	7,859.8				
12/1/2010	not measured					

Carbon Resources LLC

Kinney II Baseline Water Sampling

Ground Water Field Measurements

CR-06-09-BLW

DEPTH DATUM :	Top of PVC completion string		
DEPTH DATUM ELEVATION:		8842.9	
Ground Level Elevation:	8,840.4	(Depths in blue are from Ground Level)	
Screened Interval Depth:		1020	1040
Screened Interval Elevation:		7820.4	7800.4
Hiawatha Seam Interval Depth:		990	1001.5
Hiawatha Seam Interval Elevation:		7850.4	7838.9

Date	Water Level Depth from DATUM (ft)	Water Level Elevation (ft)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
	Water appeared during drilling at ~760 feet.					
	After drilling deeper, apparent wl was ~800 feet.					
	During geophysical logging wl was 935 feet.					
8/18/2006	989.5	7,853.4				
9/7/2006	990.5	7,852.4				
10/30/2006	990.8	7,852.1				
11/27/2006	not measured					
12/26/2006	991.0	7,851.9				
1/31/2007	991.0	7,851.9				
2/19/2007	990.3	7,852.6				
3/29/2007	991.2	7,851.7				
4/25/2007	990.8	7,852.1				
5/29/2007	991.0	7,851.9				
6/25/2007	not measured					
7/30/2007	not measured					
6/16/2008	991.4	7,851.5				
8/26/2008	991.8	7,851.1		Reviesed 11 Feb 2011		
10/29/2008	992.2	7,850.7				
6/23/2010	992.3	7,850.6				
9/28/2010	992.3	7,850.6				
12/1/2010	991.8	7,851.1				

Carbon Resources LLC

Kinney II Baseline Water Sampling

Ground Water Field Measurements

CR-10-11

DEPTH DATUM :	Top 10" Steel Casing			
DEPTH DATUM ELEVATION:		7656.67		
Ground Level Elevation:	7,655.4	(Depths in blue are from Ground Level)		
Screened Interval Depth:		60.1	70.1	
Screened Interval Elevation:		7595.3	7585.3	
Hiawatha Seam Interval Depth:		N/A	N/A	
Hiawatha Seam Interval Elevation:		N/A	N/A	

Date	Water Level Depth from DATUM (ft)	Water Level Elevation (ft)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
7/13/2010	Hole is ARTESIAN. Cuttings DRY down to 20 ft.					
7/14/2010	Developed for ~ 12 hours					
7/15/2010	10.4	7,646.3	7.6		250*	11.0
8/31/2010	9.5	7,647.2	7.02		300*	10.0
9/28/2010	9.5	7,647.2	7.57		539	9.3
10/30/2010	8.7	7,648.0	7.36		762	8.5
11/30/2010	8.5	7,648.2	6.32		540	7.3
12/29/2010	7.7	7,649.0	6.34		546	7.5
1/22/2011	7.8	7,648.9	6.56		553	7.5
2/24/2011	8.2	7,648.5	6.55		539	8.1
				Reviesed 26 Feb 2011		

* Hardness from Colorimetric Strips

Carbon Resources LLC

Kinney II Baseline Water Sampling

Ground Water Field Measurements

CR-10-12

DEPTH DATUM :	Top of 10" Steel Casing			
DEPTH DATUM ELEVATION:		7703.83		
Ground Level Elevation:	7,702.3	(Depths in blue are from Ground Level)		
Screened Interval Depth:		82.6	92.6	
Screened Interval Elevation:		7619.7	7609.7	
Hiawatha Seam Interval Depth:		N/A	N/A	
Hiawatha Seam Interval Elevation:		N/A	N/A	

Date	Water Level Depth from DATUM (ft)	Water Level Elevation (ft)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
7/10/2010	Hole is Artesian. First water detected during drilling ~90 ft.					
7/12/2010	Developed @~15gpm for ~ 20 hours					
7/14/2010	54.6	7,649.2	7.8		250*	11.0
8/31/2010	53.1	7,650.7	7.4		300*	10.0
9/28/2010	53.0	7,650.8	7.62		588	8.9
10/30/2010	53.2	7,650.6	7.6		730	8.0
11/30/2010	52.5	7,651.3	6.56		518	7.3
12/29/2010	51.9	7,652.0	6.5		526	7.6
1/22/2011	51.9	7,652.0	6.71		534	7.8
1/24/2011	52.1	7,651.7	6.75		526	8.1

Reviesed 26 Feb 2011

* Hardness from Colorimetric Strips

Carbon Resources LLC

Kinney II Baseline Water Sampling
Ground Water Field Measurements

Eagle Spring* (Miller Spring)

Elevation: **~7,700**

Revised Feb. 2011

Date	Estimated Flow (gpm)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
5/11/2005	<10	7.35	6	98.9	18.0
9/6/2005	dried up				
10/31/2005	dried up				
11/28/2005	dried up				
12/22/2005	dried up				
1/22/2006	dried up				
2/26/2006	dried up				
3/27/2006	dried up				
4/26/2006	<10	7.2	4.7	41.8	21.0
5/25/2006		8.18	5.9	83.7	28.9
6/29/2006	dried up				
7/31/2006	dried up				
8/20/2006	dried up				
9/7/2006	dried up				
10/30/2006	dried up				
11/27/2006	dried up				
12/26/2006	dried up				
1/31/2007	dried up				
2/19/2007	dried up				
3/29/2007	dried up				
4/25/2007	dried up				
5/29/2007	dried up				
6/25/2007	dried up				
7/30/2007	dried up				
3/25/2008	snow				
6/16/2008	2	7.31	5	44.1	23.5
8/26/2008	dried up				
10/29/2008	dried up				
6/23/2010	dried up				
9/28/2010	dried up				
12/1/2010	snow				
2/24/2011	snow				

*The sample collected at Eagle Spring in May 2005 was mislabeled "Eagle Springs" and analytic data are labeled accordingly. Data labeled Eagle Spring & Eagle Springs represent samples collected at the same location. This same spring was later mislabeled Miller Spring

Carbon Resources LLC

Kinney II Baseline Water Sampling
Ground Water Field Measurements

Angle Spring

Elevation: **~7,940**

Revised Feb. 2011

Date	Estimated Flow (gpm)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
9/6/2005	0.25	7.4	3.7	358	22.0
10/31/2005	0.33	6.0	4.7	519	10.6
11/28/2005	0.35	6.5	4.7	428	22.2
12/22/2005	0.35	5.2	3.9	512	11.6
1/22/2006	0.31	4.4	8.4	469	8.9
2/26/2006		8.3	4.7	385	14.7
3/27/2006	0.35	**7.0**		**670**	~10.0
4/26/2006	0.75	7.3	5.1	361	18.0
5/25/2006	1.00	6.0	3.8	492	20.5
6/29/2006		7.5	6.3	522	20.9
7/31/2006	1.25	7.2	3.7	410	29.9
8/20/2006	1.03	7.3	3.5	156	22.3
9/7/2006	0.86	lab	4	387	18.5
10/30/2006	not measured				
11/27/2006	not measured				
12/26/2006	not measured				
	ACCESS DEINIED				

NOTE: Bolded values measured in March 2006 were analyzed at the laboratory. Specific conductivity values were actually measured as conductivity.

Carbon Resources LLC

Kinney II Baseline Water Sampling
Ground Water Field Measurements

Aspen Spring

Elevation: **~8,360**

Revised April. 2011

Date	Estimated Flow (gpm)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
11/12/2007	no flow*				
3/25/2008	snow				
6/16/2008	low flow**	8.69	2.2	190	29.8
8/26/2008	not meas	7.91	4	496	32.8
10/29/2008	low flow**	7.14	3.7	541	5.7
6/23/2010	not meas	*12*	*20.4*	295	24.6
9/28/2010	nearly dry	9.33		419	14.6
12/1/2010	snow				
2/24/2011	snow				

* no flow = upper bank of pond is dry
**low flow = upper bank of pond is soggy
Italicized Values are SUSPECT

Rock Logic Consulting LLC

Rock Logic Consulting
PO Box 544 • Cedaredge, CO 81413
Phone: (435) 851-9044 • rocklogicconsulting@gmail.com
Brad Lindsay • Consulting Geologist

Memorandum

Date: 20 April 2011
To: Greg Hunt – Carbon Resources
From: Brad Lindsay
Subject: Aspen Spring Flow Data

This memo is in response to your request for flow data at the sample location "Aspen Spring" in Eagles Canyon east of Scofield, Utah. It was previously designated "Eagle Pond 1" in the spring and seep survey conducted in June 2006. Below is a photo of the pond taken during the spring and seep survey, which was inadvertently omitted from the spring and seep survey report. It appears that someone made an embankment to catch flow from a spring to provide water for animals. The pond sits west of the road and east of the drainage bottom. If any water were to flow down the canyon it would pass to the west of the pond. It is positioned to catch runoff water from only a small area. The water is considered spring water because the pond does not dry up completely even in the summer.

Aspen Spring has been visited nine times, in addition to the Spring and Seep Survey, and water samples have been collected six times. The pond was snow covered the other three visits. Quantitative flow measurements have not been collected because it is unclear where water enters into the pond. No visible stream or spring flows into it and water has never been observed to top the berm and flow out. The upper bank, south east side of the pond, is sometimes wet. Uphill to the south the top of an old buried pipe is exposed. This may be carrying water to the bottom of the pond although I never observed either end of the pipe, just the short exposed section uphill from the pond.

This location was selected for sampling because the ponding results in enough water to sample. The other nearby seeps do not appear to produce enough water to collect an adequate sample. Pond 2 was not chosen as the sample location because it is larger, holding water that might not be as representative of spring water, and the recharge is not visible. Both ponds and the nearby seeps appear to be basically in line and all part of one system.

I reviewed my field notes from when I was at the site collecting water samples. Generally I did not make any notes regarding flow of the spring because the flow is not observable. There were four dates when I did make notes of conditions at the pond.

- November 12, 2007 I noted that there is no visible flow. The upper bank was dry.
- June 16, 2008 I noted low flow. The upper bank of the pond was soggy.
- October 29, 2008 I noted low flow. The upper bank of the pond was soggy.
- September 28, 2010 I noted that the pond was nearly dry.

View of Aspen Spring (AKA Eagle Pond 1) looking north northwest. June 6, 2006

HANSEN ALLEN & LUCE INC ENGINEERS

CLIENT Carbon Resources
PROJECT
FEATURE Aspen Spring
PROJECT NO 130B.01.600

SHEET 1 OF 1
COMPUTED DCH
CHECKED
DATE 21 APR 2011

ESTIMATE OF ASPEN SPRING FLOW

Assumptions

1. No Surface Outflow from Spring
2. Spring is approx 20' in diameter
3. Evap Can be estimated from Pan Evap data (Class A Pan)
4. Source of water is subsurface, therefore, seepage is minimal
5. Peak flow occurs in June
6. Scofield Pan data is applicable - 1948-1991 June Evap = 7.84"
7. Wildlife also drink water based on Trail Evidence
   Assume the following users

User	#	Qty @	Total
Elk	5	0.0056	0.028
Deer	10	0.0014	0.014
Other	50	0.00089	0.040
			0.084 ac-ft

8. Water Level stays the same in June
9. Aspen Spring is 20' in diameter, approximated by a circle
10. Aspen Spring is not heavily used by large animals due to the lack of Muddy hoof print damage (ie: livestock)

Calc July flow (31 days)

Animals $0.084 ac\text{-}ft = 3659 ft^3/12 = 305 ft^3$

Evaporation

$\frac{7.84"}{12} = 0.653 ft$

$Area = \frac{\pi}{4}(20)^2 = 314 ft^2$

$Vol = 314 * 0.653 = 205 ft^3$ (85,794 gal)

$V_{TOTAL} = 305 + 205 = 510 ft^3$ (213,440 gal)

$Total\ Flow = \frac{213,440\ gal}{31\ d * 24\ \frac{hr}{d} * 60\ \frac{min}{hr}} = 4.78\ gpm$

$Evap\ Flow = \frac{85,794}{31(24)60} = 1.9\ gpm$

Flow Range - 2-5 gpm

However, flows are most likely in the 3-4 gpm range since without constant Animal demand would result in daily fluctuations.

UTAH

MONTHLY AVERAGE PAN EVAPORATION (INCHES)

	PERIOD OF RECORD	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
ARCHES NATL PARK HQ	1980-2005	0.00	0.00	0.00	7.44	9.81	12.33	12.94	11.15	8.16	4.73	0.00	0.00	66.56
BEAR RIVER BAY	1969-1996	0.00	0.00	0.00	6.27	10.17	12.59	13.86	12.29	7.83	4.89	0.00	0.00	67.90
BEAR RIVER REFUGE	1948-1984	0.00	0.00	0.00	4.80	7.21	8.66	10.46	9.30	6.13	3.27	1.27	0.00	51.10
BRYCE CANYON NAT'L PRK	1971-1978	0.00	0.00	0.00	0.00	6.86	7.86	8.07	7.21	5.30	0.00	0.00	0.00	35.30
FARMINGTON USU FLD STN	1948-2005	0.00	0.00	0.00	0.00	7.33	6.35	9.25	8.62	4.63	2.97	0.00	0.00	39.15
FERRON	1948-2005	0.00	0.00	0.00	5.20	5.66	8.06	6.58	6.39	5.49	3.53	0.00	0.00	40.91
FISH SPRINGS REFUGE	1960-2005	0.00	0.00	0.00	7.02	10.70	12.90	15.92	13.58	9.92	5.84	0.00	0.00	75.88
FLAMING GORGE	1957-2005	0.00	0.00	0.00	0.00	6.23	8.74	9.71	8.62	5.76	3.94	0.00	0.00	43.00
FORT DUCHESNE	1894-2005	0.00	0.00	0.00	5.16	7.41	8.61	9.06	7.98	5.57	3.25	0.00	0.00	47.04
GREEN RIVER AVIATION	1893-2005	0.00	0.00	0.00	6.07	8.07	9.29	9.49	7.97	5.74	3.52	1.60	0.00	51.75
GUNNISON	1956-1990	0.00	0.00	0.00	5.10	7.23	8.70	9.65	8.26	6.03	3.81	0.00	0.00	48.78
HITE	1949-1962	0.00	0.00	0.00	7.84	11.74	14.14	14.01	12.44	8.34	4.86	1.94	0.00	75.31
LOGAN USU EXP STN	1950-1978	0.00	0.00	0.00	4.01	5.98	7.05	8.37	7.50	5.02	2.92	0.00	0.00	40.85
LOGAN 5 SW EXP FARM	1969-2005	0.00	0.00	3.30	4.57	6.57	8.48	10.05	8.93	5.88	3.51	0.00	0.00	51.29
MANILA	1952-2005	0.00	0.00	0.00	0.00	7.31	8.66	9.83	8.37	6.50	4.63	0.00	0.00	45.30
MEXICAN HAT	1948-2005	0.00	0.00	6.31	8.45	11.99	14.42	14.87	12.48	9.37	5.52	2.25	0.00	85.66
MILFORD	1906-2005	0.00	0.00	0.00	7.47	10.22	13.54	15.47	13.24	9.88	6.16	2.32	0.00	78.30
MOAB	1889-2005	0.00	0.00	4.19	7.29	10.41	12.03	12.72	10.75	7.66	4.25	2.26	0.00	71.56
MORGAN	1948-2005	0.00	0.00	0.00	4.94	6.96	7.30	9.07	8.01	6.15	3.74	0.00	0.00	46.17
PIUTE DAM	1948-1971	0.00	0.00	0.00	0.00	7.91	9.98	10.13	8.40	6.98	4.60	0.00	0.00	48.00
PROVO AIRPORT	1948-1953	0.00	0.00	2.91	6.03	6.83	8.62	8.88	8.36	6.09	3.41	0.00	0.00	51.13
PROVO BYU	1980-2005	0.00	0.00	2.59	4.71	6.81	8.77	9.85	8.70	5.59	2.92	0.00	0.00	49.94
PROVO RADIO KAYK	1952-1977	0.00	0.00	0.00	4.38	5.94	7.53	8.32	7.58	5.40	3.21	1.53	0.00	43.89
ST GEORGE	1862-2005	0.00	0.00	4.57	7.36	10.08	12.22	13.17	11.55	8.22	4.83	2.68	0.00	74.68
SALTAIR SALT PLANT	1956-1991	0.00	0.00	3.66	6.20	9.19	11.88	14.40	12.67	8.58	4.86	2.32	0.00	73.76
SCOFIELD DAM	1948-1991	0.00	0.00	0.00	0.00	5.52	7.84	8.29	6.94	5.13	3.90	0.00	0.00	37.62
SEVIER DRY LAKE	1987-1993	0.00	0.00	2.93	6.33	13.52	16.06	18.32	0.00	0.00	0.00	0.00	0.00	57.16
STRAWBERRY RESERVOIR EA	1956-1977	0.00	0.00	0.00	0.00	5.82	7.28	7.87	7.31	5.08	3.02	0.00	0.00	36.38
UTAH LAKE LEHI	1928-2003	0.00	0.00	2.77	5.19	7.11	8.80	9.61	8.58	6.10	3.81	1.42	0.00	53.39
VERNAL ARPT	1928-2005	0.00	0.00	0.00	5.07	6.41	7.48	6.64	6.34	4.89	2.92	0.00	0.00	39.75
WANSHIP DAM	1955-2005	0.00	0.00	0.00	0.00	6.09	6.79	7.41	6.59	4.79	3.19	0.00	0.00	34.86

Class A Pan Coeff = 0.70 - 0.75 (INTRO TO HYDROLOGY)

Annual Evap for Scofield Dam = 37.62" = 3.135'

$A = \frac{\pi}{4}(4)^2 = 12.56\ ft^2$

3.135' * 0.70 (Lower due to Wooded Loc) = 2.195'

NOTE: data from www.wrcc.dri.edu/htmlfiles/westevap.final.html#UTAH

STOCKWATERING: The diversion figures for this purpose are based on year-round watering. Stock operations for lesser or intermittent periods would need adjustment accordingly. Water diverted for this use is generally considered to be 100% depleted by the animal, evaporation, phreatophytes, and/or waste water collection.

cow or horse	0.028	acre-foot
sheep, goat, swine, moose, or elk	0.0056	acre-foot
ostrich or emu	0.0036	acre-foot
llama	0.0022	acre-foot
deer antelope, bighorn sheep, or mt. goat	0.0014	acre-foot
chicken, turkey, chukar, sagehen, or pheasant	0.00084	acre-foot
mink or fox (caged)	0.00005	acre-foot

NOTE: Copied from Utah Division of Water Rights Web Site

Carbon Resources LLC

Kinney II Baseline Water Sampling
Ground Water Field Measurements

Sulfur Spring *

Elevation: **~7,670**

Revised Feb. 2011

Date	Estimated Flow (gpm)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
5/11/2005	73	6.8	0.7	603	13.6
9/6/2005	32	7.2	2.4	559	15.9
10/31/2005	90	5.7	2.6	541	13.2
11/28/2005	76	5.9	3.9	561	11.9
12/22/2005	69	5.6	3.5	490	17.4
1/22/2006	69	7.6	1.3	410	14.7
2/26/2006	69	8.1	4.3	383	23.9
3/27/2006	90	**7.4**		**710**	~14.0
4/26/2006	64	7.0	1.2	413	23.4
5/25/2006	79	7.5	2.4	503	28.2
6/29/2006	69	7.5	2.9	550	25.1
7/31/2006	74	7.3	2.0	446	24.1
8/20/2006	72	7.3	2.3	169	24.1
9/7/2006	86	lab	2.2	473	22.0
10/30/2006	80	7.3	4.0	384	22.2
11/27/2006	90	7.0	1.8	389	20.0
12/26/2006	90	7.0	3.0	538	20.0
1/31/2007	90	7.0	5.1	682	17.4
2/19/2007	88	7.0	4.1	473	21.5
3/29/2007	72	7.4	4.4	544	21.7
4/25/2007	90	7.3	7.0	557	23.4
5/29/2007	91	7.4	5.5	523	22.8
6/25/2006	86	7.3	2.4	615	27.5
7/30/2007	136	7.3	4.0	507	22.7
3/25/2008	93	6.8	2.2	973	21.9
6/16/2008	93	7.7	1.9	341	31.4
8/26/2008	127	7.1	2.5	646	27.5
10/29/2008	88	7.3	4.4	595	17.1
6/23/2010	82	*12.0*	*14.6*	423	17.4
9/28/2010	75	7.4		715	14.8
12/1/2010	93	6.3		714	13.8
2/24/2011	83	6.3		710	13.7

NOTE: Bolded values measured in March 2006 were analyzed at the laboratory. Specific conductivity values were actually measured as conductivity.

*Samples collected at Sulfur Spring have occasionally been mislabeled "Sulfur Springs", "Sulfer Spring", & "Sulfer Springs". From May 2005 to Nov 2006 sample names varied. From Dec 06 to present, samples have been labeled Sulfur Spring. Analytic data are Labeled accordingly. Data labeled Sulfur Spring, Sulfur Springs, Sulfer Spring, & Sulfer Springs represent samples collected at the same location.

Italicized Values are SUSPECT

Carbon Resources LLC

Kinney II Baseline Water Sampling

Ground Water Field Measurements

CR-06-02

DEPTH DATUM :	Top of PVC completion string			
DEPTH DATUM ELEVATION:		8,339.55		
Ground Level Elevation:	8,336.7	(Depths in blue are from Ground Level)		
Screened Interval Depth:		422.7	432.7	
Screened Interval Elevation:		7,914.0	7,904.0	
Blank Interval Depth:		432.72	442.72	
Blank Interval Elevatioin:		7,904.0	7,894.0	
Hiawatha Seam Interval Depth:		428	437	
Hiawatha Seam Interval Elevation:		7908.67	7899.67	

Date	Water Level Depth from DATUM (ft)	Water Level Elevation (ft)	pH	Dissolved Oxygen (ppm)	Specific Conductivity (Us)	Temp (C)
	No water encountered during drilling.					
3/8/2006	437.0	7,902.6				
4/26/2006	437.1	7,902.5				
*5/25/2006	*441.4*	7,898.2				
6/29/2006	438.3	7,901.3				
7/19/2006	438.1	7,901.5				
8/20/2006	438.4	7,901.2				
9/7/2006	439.0	7,900.6				
10/30/2006	437.6	7,902.0				
11/27/2006	439.3	7,900.3				
12/26/2006	439.3	7,900.3				
1/31/2007	439.7	7,899.9				
2/19/2007	439.9	7,899.7				
3/29/2007	439.3	7,900.3				
4/25/2007	439.9	7,899.7				
5/29/2007	440.1	7,899.5				
6/25/2007	not measured					
7/30/2007	not measured					
11/12/2007	442.3	7,897.3				
3/25/2008	snow covered					
6/16/2008	442.2	7,897.4				
8/26/2008	442.7	7,896.9				
10/29/2008	442.7	7,896.9				
6/23/2010	442.7	7,896.9				
9/28/2010	442.7	7,896.9				
12/1/2010	441.7	7,897.9				
3/3/2011	443.2	7,896.4				

Note all water levels are Below the Screened Interval therefore are in the closed "blank" and do not represent a static ground water level as confirmed by downhole video and multiple TD (Total Depth) soundings.

Reviesed 4 March 2011 Following Dowhole Video and TD Sounding.

Tagged bottom of Blank @ 445.6
Elev= 7,894

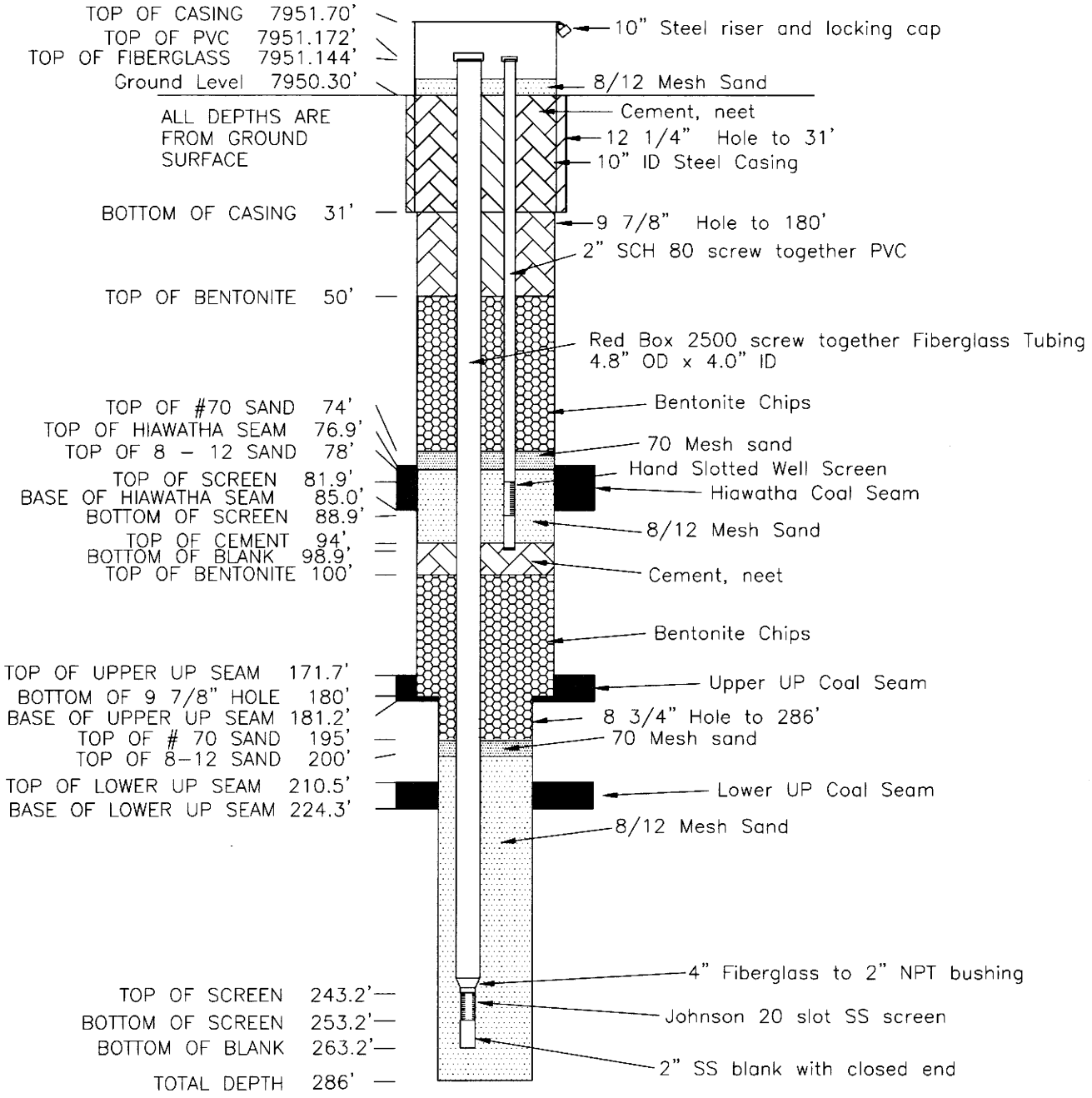
* Measurement on 5-25-06 is suspect

Exhibit 11

Monitoring Well Completion Details

Monitor Well Completion Diagram
CR-06-01 AND CR-06-01-BLW

NOT TO SCALE



8000 ft Elevation Datum
E. 1739299.757
N. 7073837.862
Gounnd Surface, ELEV. 7950'

REVISED: FEB, 2011

Carbon Resources LLC
Monitor Well Completion Diagram
CR-06-01 AND CR-06-01-BLW

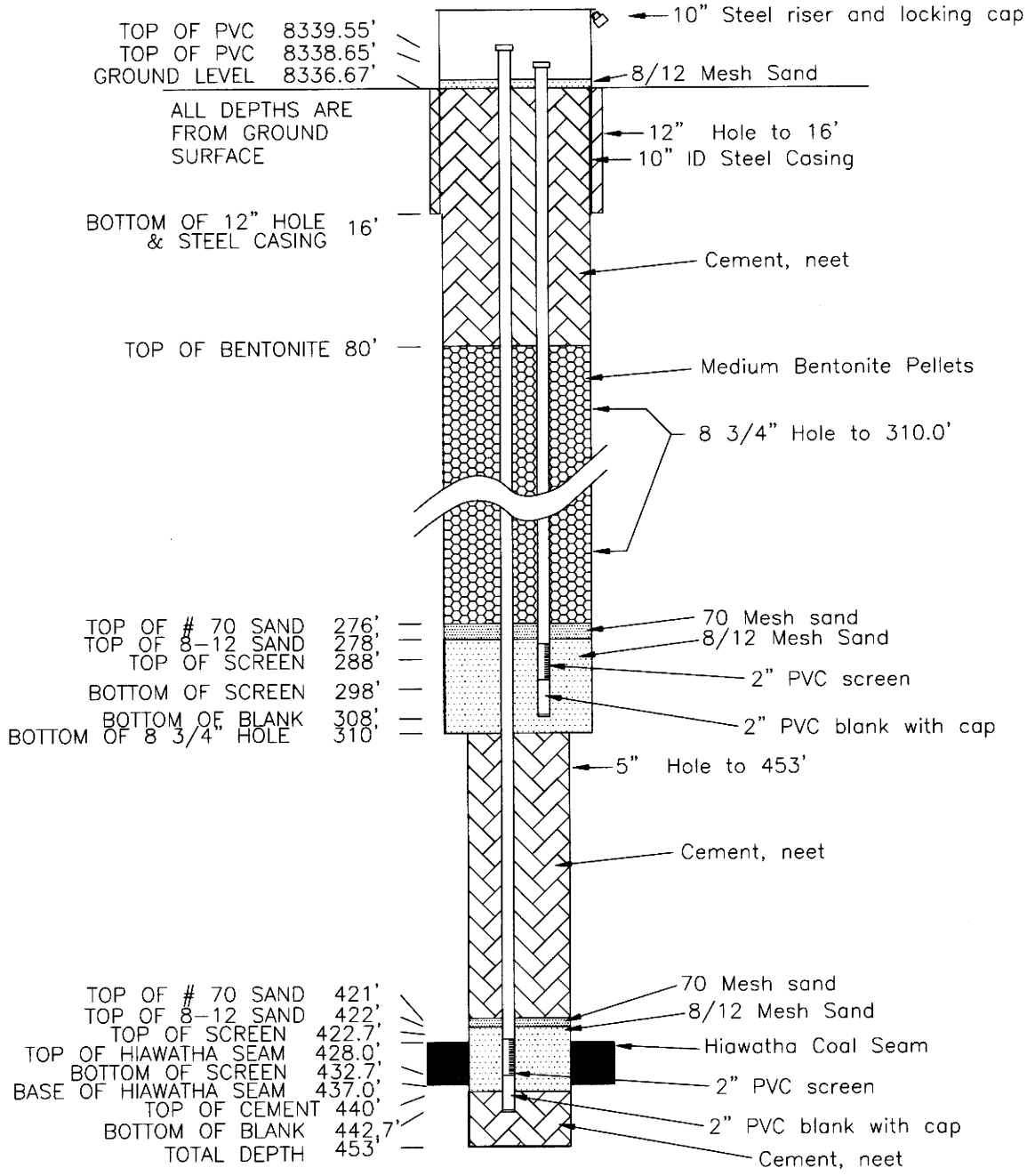
DWG	BWL
CKD	
APD	

DATE: 3/25/06

Drawing Loc: Drilling Phase 1\Completion Diagrams\CR-06-01 AS BUILT.dwg

Monitor Well Completion Diagram
CR-06-02 AND CR-06-02-ABV

NOT TO SCALE



8000 ft Elevation Datum
E. 1739673.995
N. 7072672.439
Gounnd Surface, ELEV. 8337'

REVISED: March 2011

Carbon Resources LLC
Monitor Well Completion Diagram
CR-06-02 AND CR-06-02-ABV

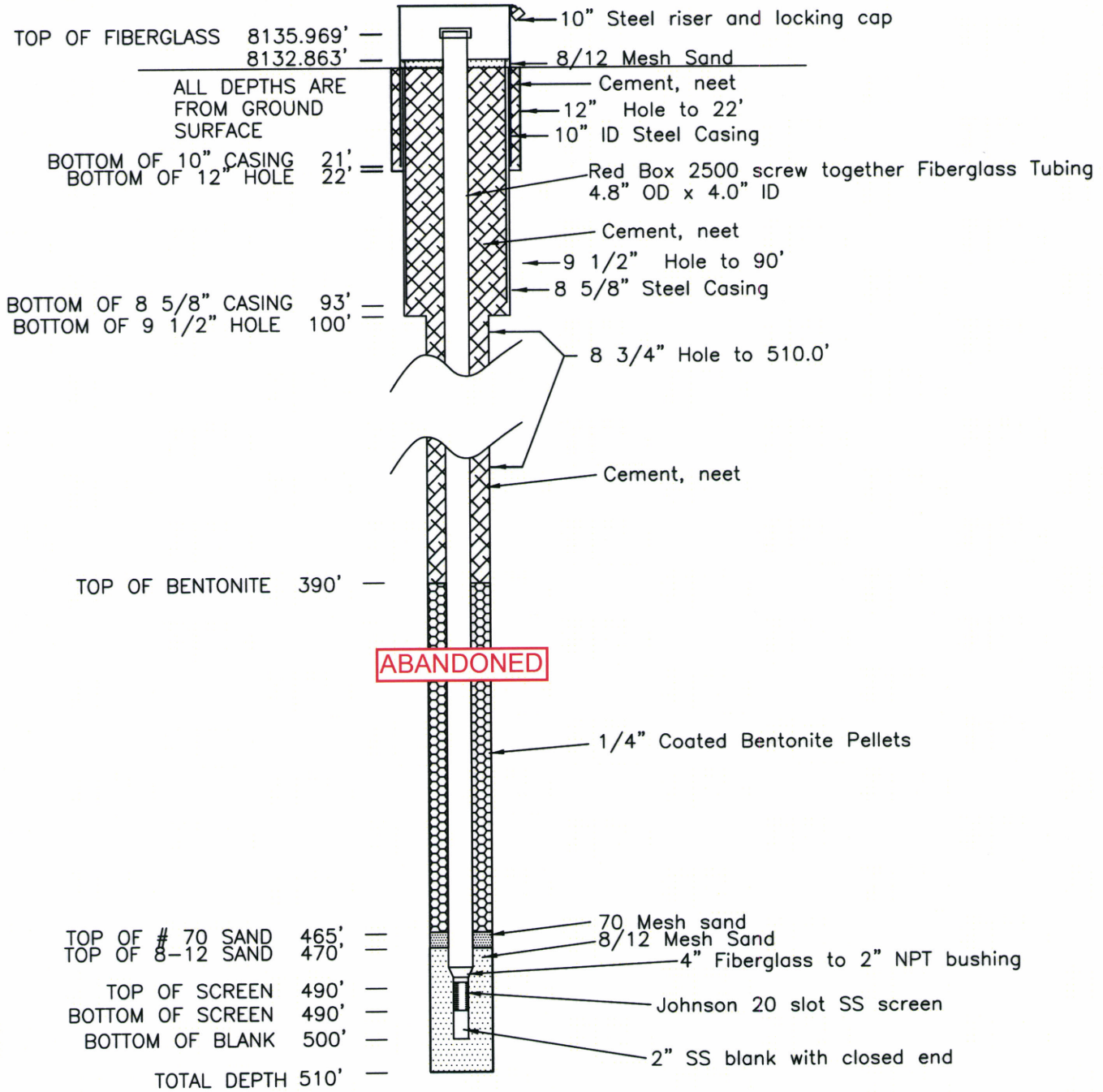
DWG	BWL
CKD	
APD	

DATE: 3/25/06

Drawing Loc: Drilling Phase 1\Completion Diagrams\CR-06-02 AS BUILT.dwg

Monitor Well Completion Diagram
CR-06-03-ABV

NOT TO SCALE



8000 ft Elevation Datum
E. 1742345.531
N. 7076325.902
Gounnd Surface, ELEV. 8132

Carbon Resources LLC
Monitor Well Completion Diagram
CR-06-03-ABV

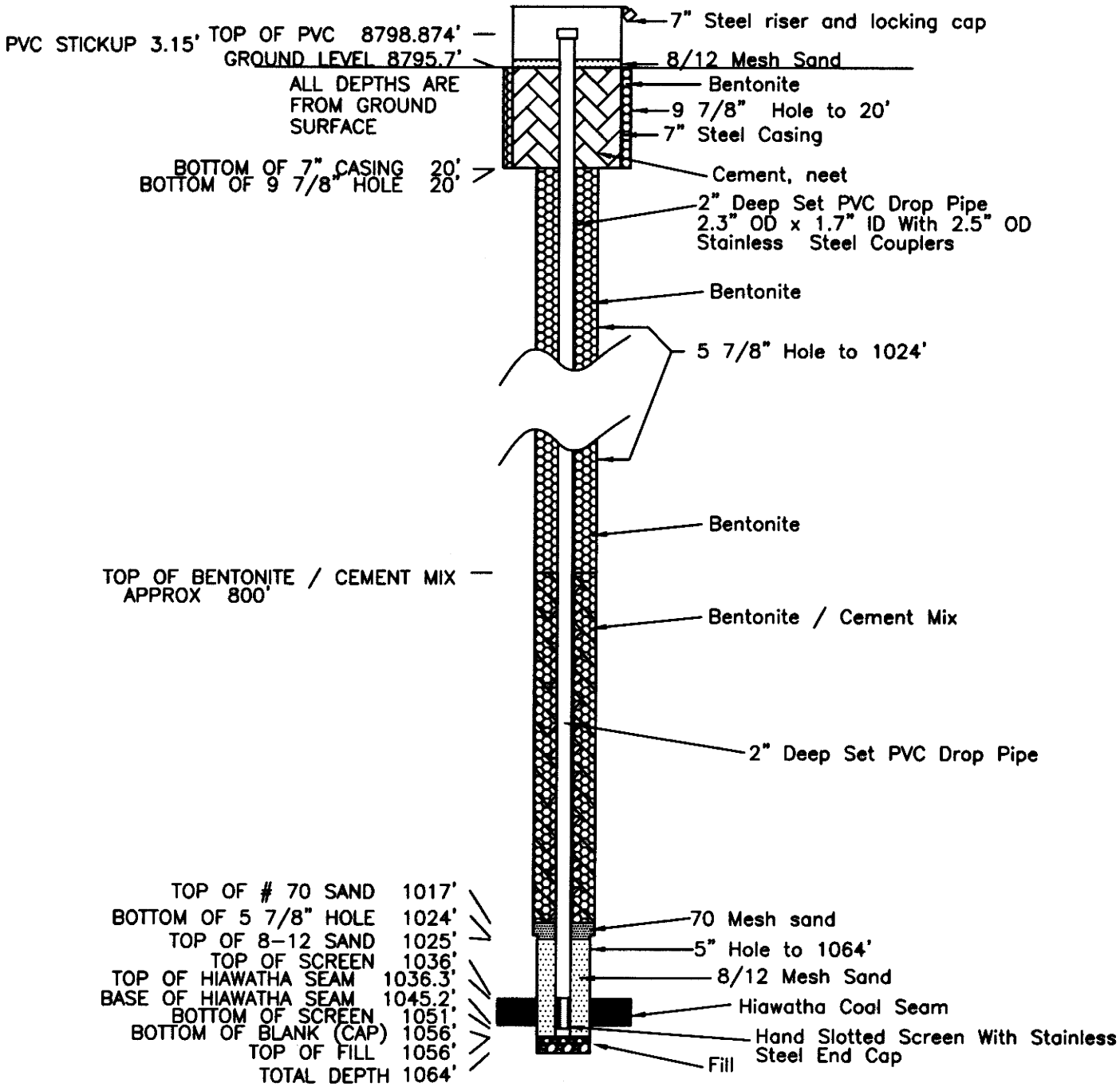
DWG	BWL
CKD	
APD	

DATE: 3/25/06

Drawing Loc: Drilling Phase 1\Completion Diagrams\CR-06-03-ABV AS BUILT.dwg

Monitor Well Completion Diagram
CR-06-05-A

NOT TO SCALE



8000 ft Elevation Datum
E. 1740939.20397
N. 7069330.51296
Gounnd Surface, ELEV. 8795.7'

Carbon Resources LLC
Monitor Well Completion Diagram
CR-06-05-A

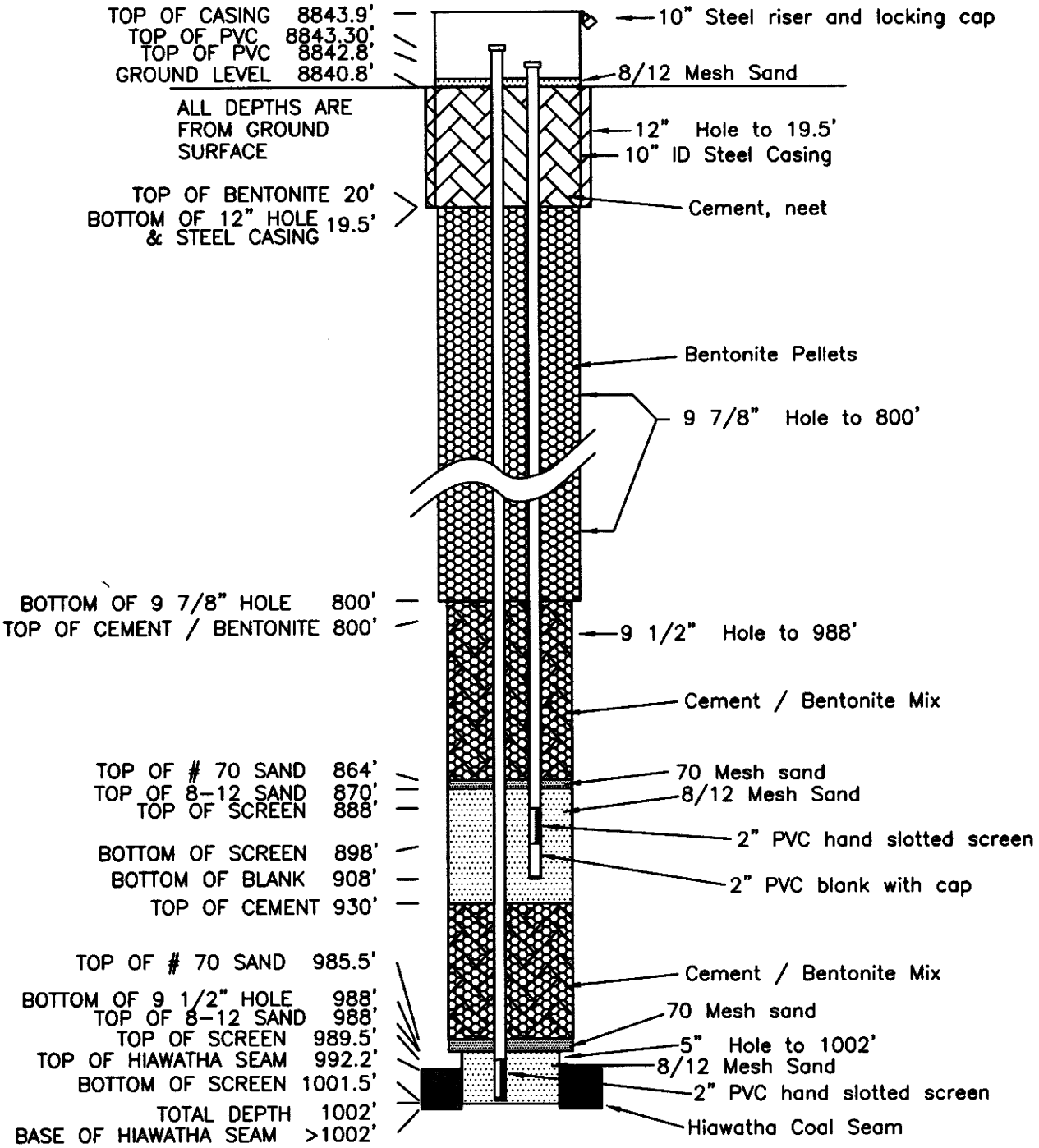
DRN	BWH	
CKD		
APD		

DATE: 12/18/06

\Completion Diagrams\CR-06-05-A AS BUILT.dwg

Monitor Well Completion Diagram
CR-06-09 AND CR-06-09-ABV

NOT TO SCALE



E. 1743857.5
N. 7073380.8
Gounnd Surface, ELEV. 8841'

Carbon Resources LLC
Monitor Well Completion Diagram
CR-06-09 AND CR-06-09-ABV

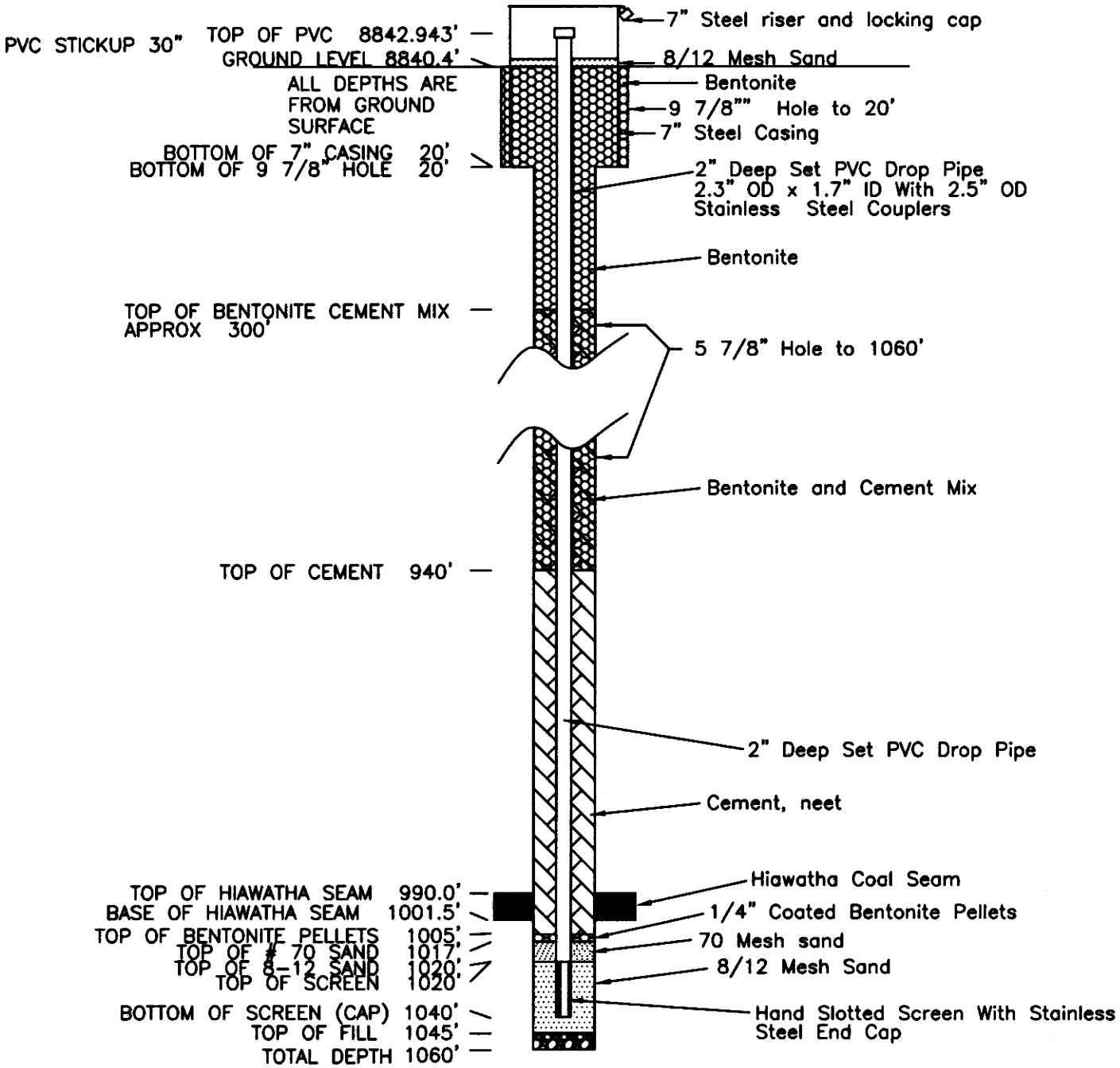
DWG	BWL
CKD	
APD	

DATE: 12/18/06

Drawing Loc: Drilling Phase 1\Completion Diagrams\CR-06-09 AS BUILT.dwg

Monitor Well Completion Diagram
CR-06-09-BLW

NOT TO SCALE



8000 ft Elevation Datum
E. 1743808.008
N. 7073416.824
Gounnd Surface, ELEV. 8840.4

Carbon Resources LL
Monitor Well Completion Diagram
CR-06-09-BLW

DWG
CHK
APP

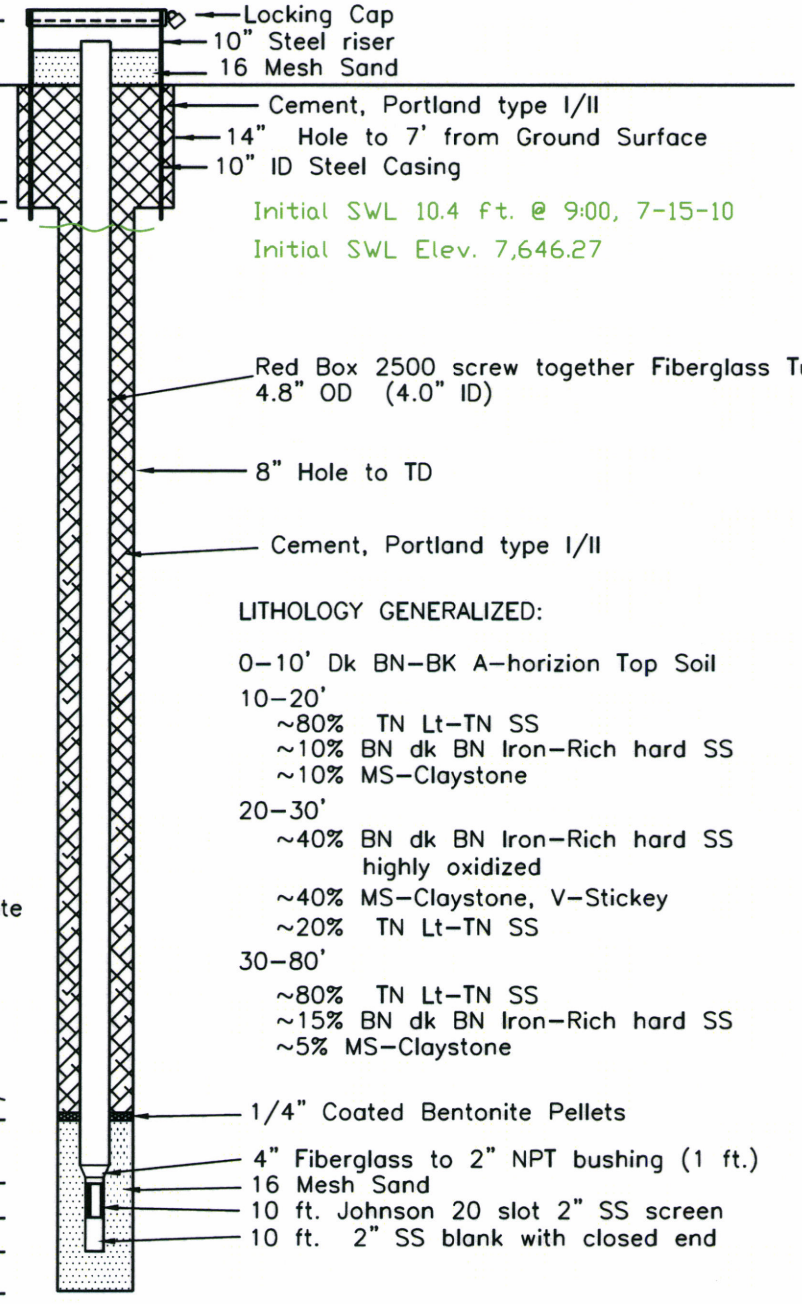
DATE: 9/8/06

\Completion Diagrams\CR-06-09-BLW AS BUILT.dwg

Monitor Well Completion Diagram

CR-10-11

NOT TO SCALE



DRILLING PROCESS GENERALIZED:

Medium=air/foam 0-30 ft.
Bentonite Mud 30-83 ft.
Relatively easy drilling, to TD

DRY 0-20 ft.

Damp @ 20 ft.

Switched medium to Mud, made it hard to tell when in water zone.
Viscosity decreased over 2 hrs while circulating mud at 81 ft.; an indication of formation water.

Measured flow by air jetting from 39 ft. @ ~2.3 gpm

Completion Materials;
3, 92.6 lb bags type I/II portland
6, 100lb. bags 16 mesh frac sand
~ 0.5 gallons of 1/4" coated bentonite
19, 92.6 lb bags type I/II portland

LITHOLOGY GENERALIZED:

0-10' Dk BN-BK A-horizion Top Soil
10-20'
~80% TN Lt-TN SS
~10% BN dk BN Iron-Rich hard SS
~10% MS-Claystone
20-30'
~40% BN dk BN Iron-Rich hard SS highly oxidized
~40% MS-Claystone, V-Stickey
~20% TN Lt-TN SS
30-80'
~80% TN Lt-TN SS
~15% BN dk BN Iron-Rich hard SS
~5% MS-Claystone

8000 ft (Local Elevation Convention)
E. 75,936.75
N. 38,622.95
APPROX. Ground Surface, ELEV. 7,655.4

This Survey is in Kinney Coordinate System (KCS). It was projected from State Plane NAD83 to a vertical datum of 8,000 ft. using a Combined Factor (CF) of 1.0047927. To project back, add 7,000,000 to Northing and 1,700,000 to Easting, then divide by the CF.

Drawing Loc:CR-Kinney\2010 Drilling\CR-10-11

Carbon Resources LLC

CR-10-11

Ground Water Monitor Well

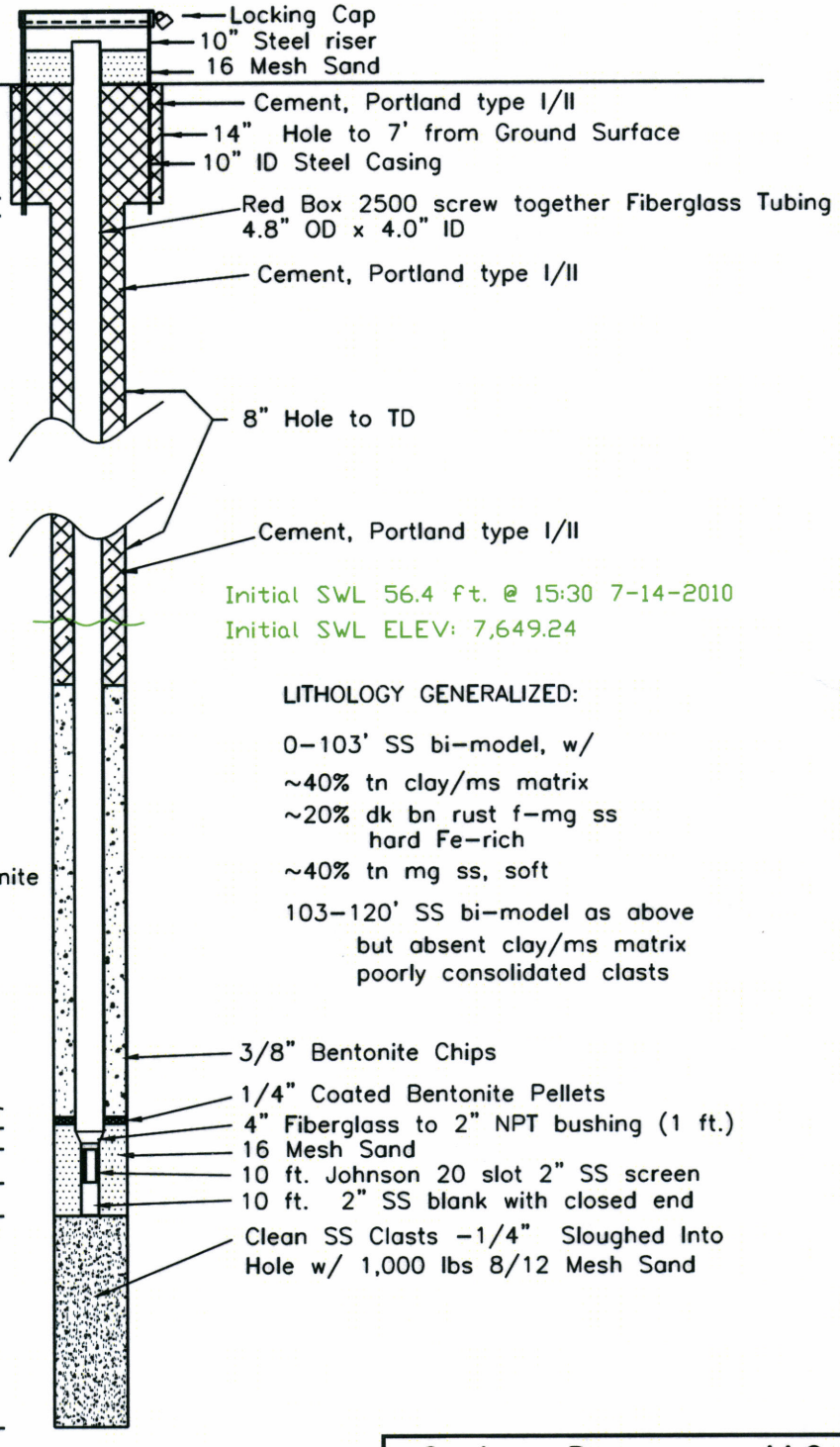
DWG	GLH
CKD	
APD	

DATE: 7-16-10

Monitor Well Completion Diagram

CR-10-12

NOT TO SCALE



DRILLING PROCESS GENERALIZED:

Medum=air/foam

Relativley easy drilling to TD

DRY 0-90 ft.
Damp @ 90 ft.
Water increasing to 103 ft.
then ~ same to 120ft.

Measured flow @ 20gpm by air jetting from 106 ft.

Completion Materials;
2, 92.6 lb bags type I/II portland
20, 50lb. bags 8-12 round sand
25, 100lb. bags 16 mesh frac sand
1.5, 5 gal buckets 1/4" coated bentonite
17, 50 lb bags 3/8"bentonite chips
10.5, 92.6 lb bags type I/II portland

LITHOLOGY GENERALIZED:

0-103' SS bi-model, w/
~40% tn clay/ms matrix
~20% dk bn rust f-mg ss
hard Fe-rich
~40% tn mg ss, soft

103-120' SS bi-model as above
but absent clay/ms matrix
poorly consolidated clasts

8000 ft (Local Elevation Convention)
E. 74,418.27
N. 38,084.79
Approx. Ground Surface, ELEV. 7,702.3

Surveyed in the Kinney Coordinate System (KCS). It was projected from State Plane NAD83 to a vertical datum of 8,000 ft. using a Combined Factor (CF) of 1.0047927. To project back, add 7,000,000 to Northing and 1,700,000 to Easting, then divide by the CF.

Carbon Resources LLC

CR-10-12

Ground Water Monitor Well

DWG	GLH
CKD	
APD	

DATE: 7-16-10

Drawing Location CR Kinney\Drilling2010